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ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS, AND PLACES OF GROWTH.

TO WHICH WILL BE ADDED,

OCCASIONAL REMARKS.

BY

JAMES EDWARD SMITH, M.D. F.R.S.

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE ACADEMIES OF STOCKHOLM, UPSAL, TURIN, LISBON, LUND, BERLIN, PHILADELPHIA, AND THE NAT. HIST. SOCIETY OF PARIS;

PRESIDENT OF THE LINNEAN SOCIETY.

THE FIGURES BY

JAMES SOWERBY, F.L.S.

———"VIRESQUE ACQUIRIT EUNDO."———*Virg.*

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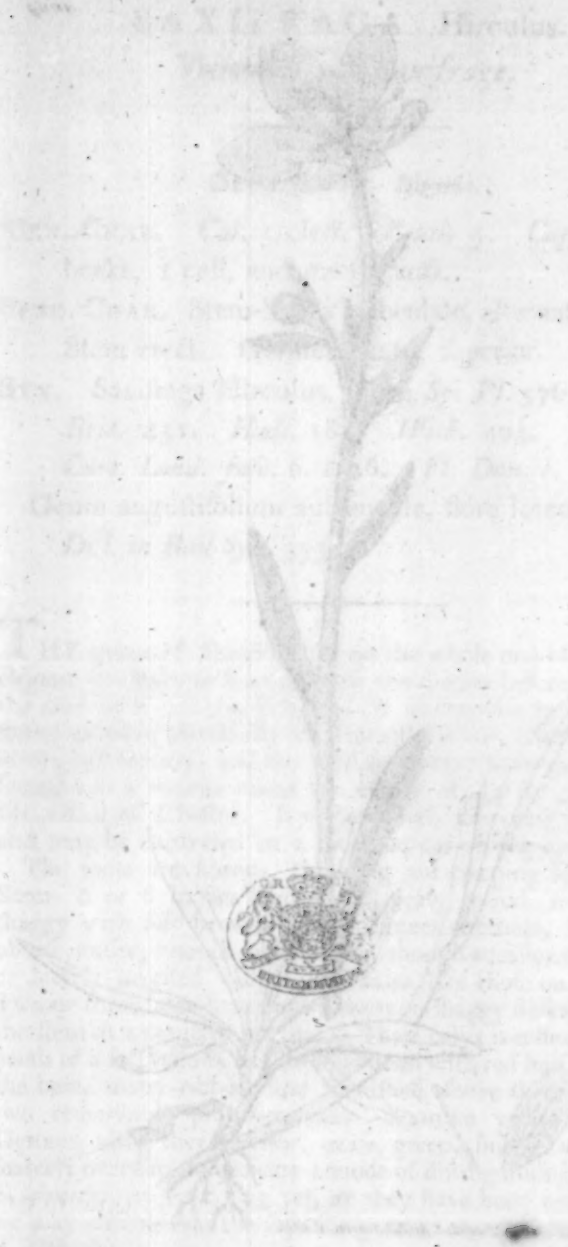


March 1, 1809. Published by Jas. Sowerby, London.

SAXIFRAGA Hirculus.

Yellow Marſh Saxifrage.

DECANDRIA Digynia.

GEN. CHAR. *Cal.* 5-cleft. *Petals* 5. *Capſ.* with 2 beaks, 1 cell, and many *ſeeds.*

SPEC. CHAR. Stem-leaves lanceolate, alternate, entire. Stem erect. Germen ovate, ſuperior.

SYN. Saxifraga Hirculus. *Linn. Sp. Pl.* 576. *Sm. Fl. Brit.* 451. *Hudſ.* 181. *With.* 404. *Hull.* 93. *Curt. Lond. faſc.* 6. *t.* 26. *Fl. Dan. t.* 200. Geum anguſtifolium autumnale, flore luteo guttato. *Dill. in Raii Syn.* 355.

THE genus of *Saxifraga* is on the whole one of the moſt elegant we have in Europe, and the ſpecies before us one of the moſt rare. It was ſhown to Dr. Richardſon by Dr. Kingſtone, growing plentifully on Knutsford moor, Cheſhire, early in the laſt century, and our wild ſpecimens were gathered laſt ſummer in a moraſs about the centre of the ſame moor by Mr. Okell of Cheſter. It is perennial, flowering in Auguſt, and may be cultivated in a moiſt border of bog earth.

The roots are fibrous, throwing out creeping leafy ſcions. Stems 6 or 8 inches high, erect, leafy, round, more or leſs ſhaggy with ſoft brown hairs. Leaves alternate, lanceolate, obtuſe, entire, ſmooth and ſhining, though occaſionally fringed or looſely inveſted with a few hairs like thoſe on the ſtem. Two or three large handſome flowers on ſhaggy ſtalks terminate the ſtem in a panicled manner. Their calyx is reflexed; their petals of a full yellow, beautifully dotted with red half way from the baſe, many-ribbed, and furniſhed above their claw with two remarkable protuberances. Stamina yellow, ſlender. Germen altogether ſuperior, ovate, green, ſmooth.—It ſeems ſcarcely neceſſary to indicate a mode of diſtinguiſhing this from *S. aizoides*, *v.* 1. *t.* 39; yet, as they have been confounded, we may remark that the ſuperior germen at once characterizes *S. Hirculus.*

Pyxidia. Published by Jas Sowerby, London.

SCHŒNUS rufus.

Brown Bog-ruſh.

TRIANDRIA Monogynia.

GEN. CHAR. *Glumes* chaffy, cluſtered; the outer ones barren. *Cor.* none. *Seed* 1, roundiſh, among the glumes.

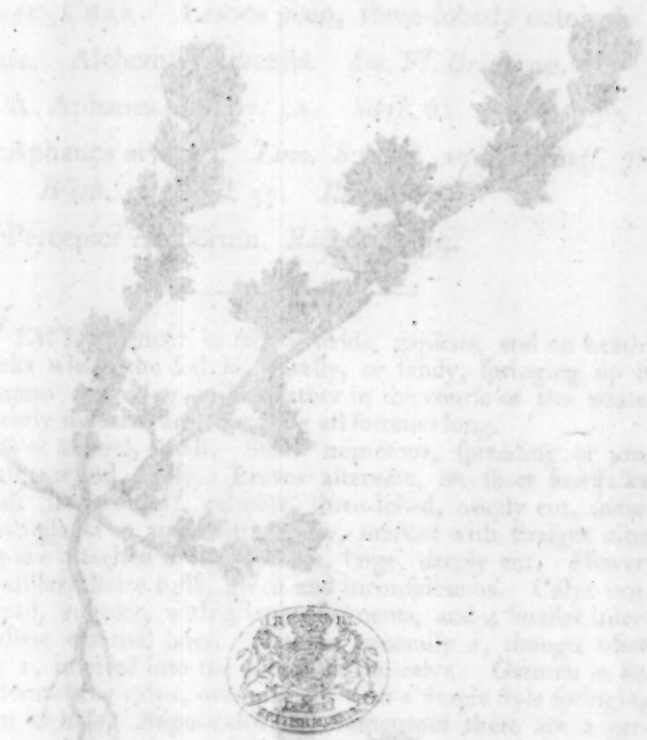
SPEC. CHAR. Stem round, naked. Spike two-ranked, longer than the ſolitary blunt involucrum: ſpikelets of few flowers. Leaves channelled.

SYN. Schœnus rufus. *Hudſ.* 15. *Sm. Fl. Brit.* 45. *With.* 80. *Hull.* 12. *Dickſ. H. Sicc. faſc.* 10. 6.

S. compreſſi varietas. *Lightf.* 1138. *t.* 24. *f.* 2.

THIS *Schœnus*, unknown to Linnæus, has been found in marſhes near the coaſt in ſeveral parts of Scotland and the Hebrides. Lightfoot placed it in his work (probably on the authority of Yalden, who had it from its original diſcoverer Dr. Walker) by the erroneous name of *S. ferrugineus*, *p.* 86; but in his appendix fell into another miſtake in ſuppoſing it a variety of *S. compreſſus*. Hudſon deſcribed it as new by the name of *rufus*, and we believe it to be alſo his *ferrugineus*, adopted from report of Dr. Hope. Mr. Mackay has ſent it from the coaſt eaſt of Dunbar, as well as from Arran, Skye, &c. and Mr. G. Donn from Fifeſhire and Angusſhire. The ſpecimen in our plate was gathered in Angleſea by the Rev. H. Davies, whoſe remarks confirm the deſcription in *Fl. Brit.* except that the recent ſtem is ſmooth, not ſtriated, and that the ſtigmas are never more than two.

It is perennial, flowering in July. The root creeps horizontally. The fibres are a little downy. Stems erect, 4 to 6 inches high, naked, except the 2 leaves with broad ſheathing baſes at their lower part. Leaves ſmooth, ſemicylindrical, channelled above, moſtly ſhorter than the ſtem. Spike terminal, ovate, flat, moſtly ſubtended by a ſhort leafy *bractea*, and compoſed of 5 or 6 alternate ſpikelets of 2 or 3 flowers each, with ſmooth turgid poliſhed brown glumes. Stamina 3, with pale yellow linear antheræ. Stigmas revolute.



Mandeville Pub. as directed by J. Sowerby, London.

ALCHEMILLA arvenſis.

Field Ladies Mantle, or Parſley Piert.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* in 8 ſegments. *Cor.* none. *Seed* 1, naked.

SPEC. CHAR. Leaves plain, three-lobed, notched.

SYN. Alchemilla arvenſis. *Sm. Fl. Brit.* 190.

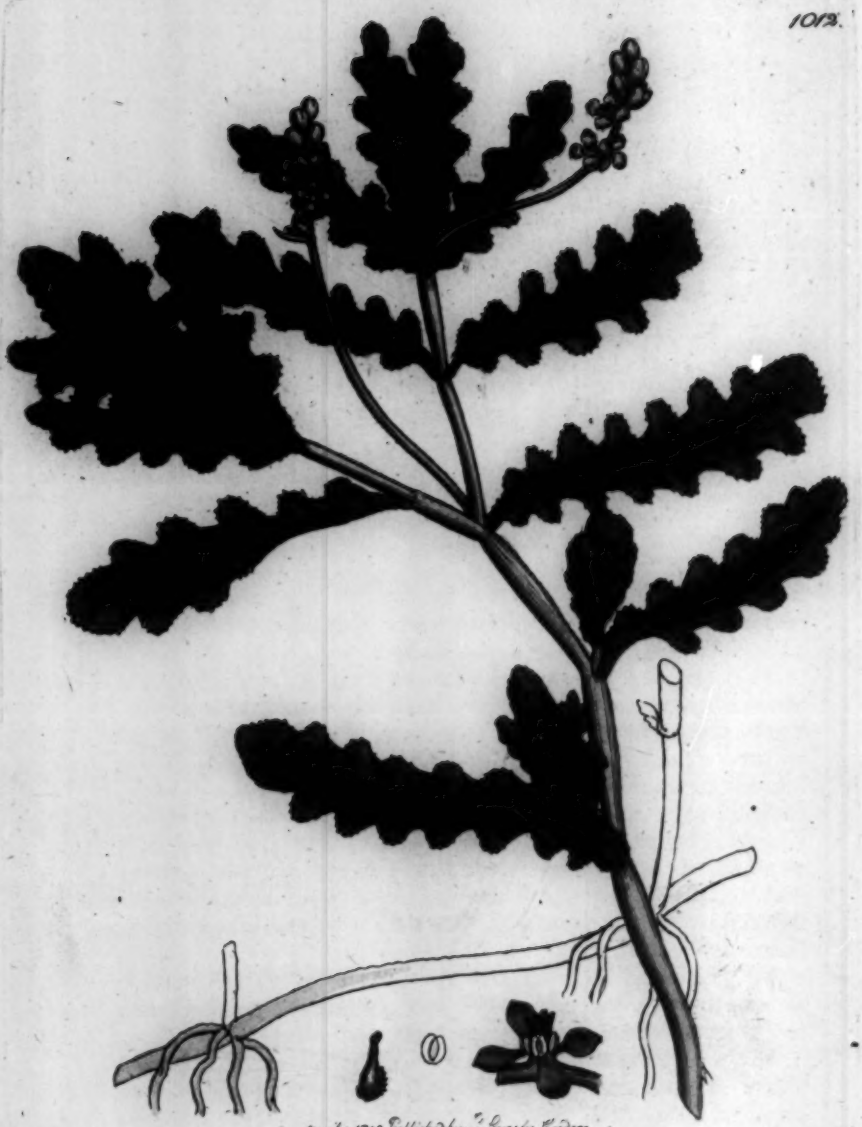
A. Aphanes. *Leers.* 54. *Sibth.* 61. *Abbot.* 36.

Aphanes arvenſis. *Linn. Sp. Pl.* 179. *Hudſ.* 72. *With.* 4. *Hull.* 37. *Relh.* 69.

Percepier Anglorum. *Raii Syn.* 159.

VERY frequent in fallow fields, gardens, and on heathy banks where the ſoil is gravelly, or ſandy, ſpringing up in autumn or during mild weather in the courſe of the winter or early months, and flowering all ſummer long.

Root annual, ſmall. Stems numerous, ſpreading or proſtrate, round, leafy. Leaves alternate, on ſhort footſtalks, plain (not plaited), palmate, three-lobed, deeply cut, ſomewhat glaucous and a little hairy, marked with ſtraight ribs. Stipulæ attached to the footſtalk, large, deeply cut. Flowers in axillary hairy tufts, green and inconſpicuous. Calyx urn-ſhaped, angular, with 4 larger ſegments, and 4 ſmaller intermediate external ones. Stamina generally 4, though often but 1, inſerted into the mouth of the calyx. Germen in the bottom of the calyx, ovate, ſmall, with a ſimple ſtyle ſpringing from its baſe. Stigma cloven. Sometimes there are 2 germens and ſtyles in one calyx, as in the common *Alchemilla*, *v.* 9. *t.* 597, with which this plant moſt indubitably accords as to genus. Its ſtipulæ, inſertion of the ſtamina and ſtyle, the alternate ſmall lobes of the calyx, and we may add its flavour and ſcent reſembling Burnet, all prove its relation to the Icoſandrous plants. It was formerly eſteemed to promote urine very powerfully, and conſequently to remove gravel and even the ſtone.



April 1. 1802. Published by J. Sowerby, London.

POTAMOGETON criſpum.

Curled Pond-weed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Petals* 4. *Style* none. *Seeds* 4.

SPEC. CHAR. Leaves lanceolate, alternate, waved, ſerrated.

SYN. Potamogeton criſpum. *Linn. Sp. Pl.* 182. *Sm. Fl. Brit.* 195. *Hudſ.* 75. *With.* 213. *Hull.* 39. *Relh.* 71. *Sibth.* 65. *Abbot.* 38. *Curt. Lond. faſc.* 5. *t.* 15.

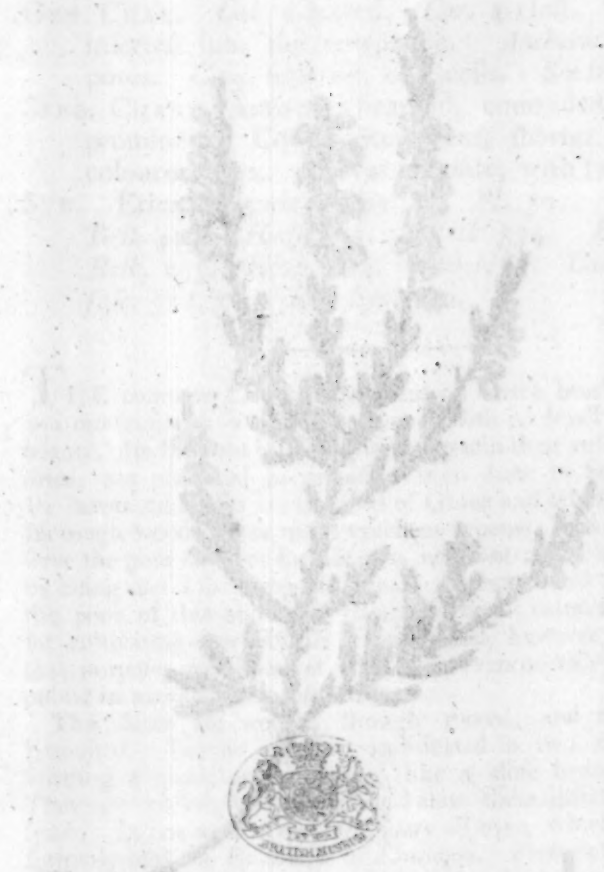
P. ſeu Fontinalis criſpa. *Raii Syn.* 149.

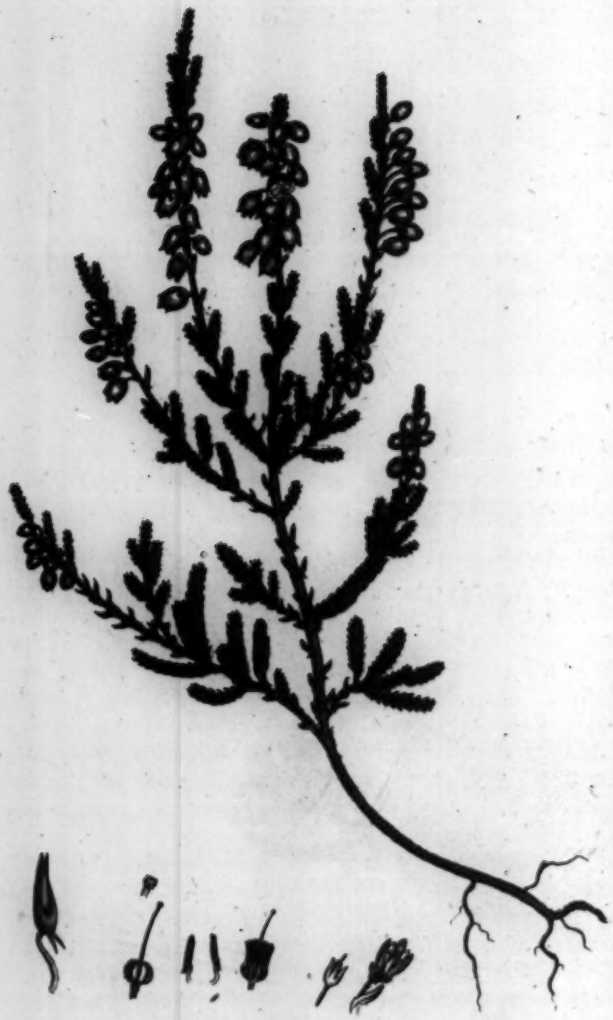
COMMON in ditches, ponds, and ſlow ſtreams, floating under water, except the flowers, which are ſeen emerging in June and July.

The creeping perennial roots run deep into the mud, and throw up numerous branched ſtems, varying in length according to the depth of the water, or force of the ſtream, as uſual in this genus, and clothed above with numerous leaves. Each ſpace between the leaves is a little compreſſed, and grooved on each ſide. Lower leaves alternate; upper generally oppoſite: all ſeſſile, lanceolate, bluntiſh, waved, finely ſerrated, pellucid, of a dull green. Flower-ſtalks a little longer than the leaves, ſolitary, each bearing a looſe ſpike of 6 or 8 ſeſſile browniſh flowers, with a tinge of purple, purple ſtyles, and yellowiſh nearly ſeſſile antheræ.

Mr. Curtis obſerves that Ducks eat the leaves as well as ſeeds of this ſpecies, and may therefore be uſeful where it increaſes to a troubleſome degree, which is not unfrequently the caſe.

What Mr. Hudſon took for *P. ſerratum* of Linnæus is certainly no other than this ſpecies with a greater proportion of oppoſite leaves, and rather leſs waved, than uſual; but the ſynonym he has applied to it from Ray's *Synopſis* probably belongs to *lucens*.





Curtis's Botanical Mag. Vol. 4. Tab. 1013.

ERICA vulgaris.

Common Heath, or Ling.

OCTANDRIA Monogynia.

GEN. CHAR. *Cal.* 4-leaved. *Cor.* 4-cleft. *Stamina* inſerted into the receptacle. *Antheræ* with 2 pores. *Capſ.* ſuperior, of 4 cells. *Seeds* many.

SPEC. CHAR. Antheræ bearded, concealed. Style prominent. Corolla deeply cut, ſhorter than the coloured calyx. Leaves oppoſite, with two ſpurs.

SYN. Erica vulgaris. *Linn. Sp. Pl.* 501. *Sm. Fl. Brit.* 417. *Hudſ.* 165. *With.* 374. *Hull.* 84. *Relh.* 155. *Sibth.* 124. *Abbot.* 87. *Curt. Lond. faſc.* 5. *t.* 30. *Raii Syn.* 470.

THE common Ling, ſo abundant on barren heathy moors and mountainous waſtes, is endowed with no ſmall degree of beauty. Its brilliant bloſſoms, which retain their colour when dried, are produced in profuſion from June to September. Its leaves and ſeeds are the food of Grous and other animals. Its tough woody ſtems make excellent brooms, and not only ſerve the poor cottager for his own fuel, but afford him profit by being uſeful for firing in towns. It ſeems hard to deprive the poor of this and other reſources, by an extravagant zeal for cultivating every morſel of waſte land, however unfit for that purpoſe, and however uſeful, or even neceſſary, to the public in various other reſpects.

The ſtems are woody, ſtrongly rooted, and repeatedly branched. Leaves oppoſite, imbricated in two ranks and forming a quadrangular figure, like a cloſe beaten chain. They are keeled, blunt, ending below their inſertion in 2 ſpurs. In one variety they are hoary all over, which Hudſon formerly took for *E. ciliaris* of Linnæus. Flowers in longiſh cluſters, drooping toward one ſide, of a ſhining roſe colour. Outer calyx of 4 green ciliated leaves; the inner (which is peculiar to this ſpecies, and perhaps ought to make it a diſtinct genus) of 4 large concave coloured leaves like petals, which conceal the true corolla. Antheræ ſhorter than the corolla; ſtyle longer. Partitions of the capſule originating from the central column.

April 1 1802 Published by Jas Sowerby London

ERICA Tetralix.

Croſs-leaved Heath.

OCTANDRIA Monogynia.

GEN. CHAR. *Cal.* 4-leaved. *Cor.* 4-cleft. *Stamina* inſerted into the receptacle. *Antheræ* with 2 pores. *Capſ.* ſuperior, of 4 cells. *Seeds* many.

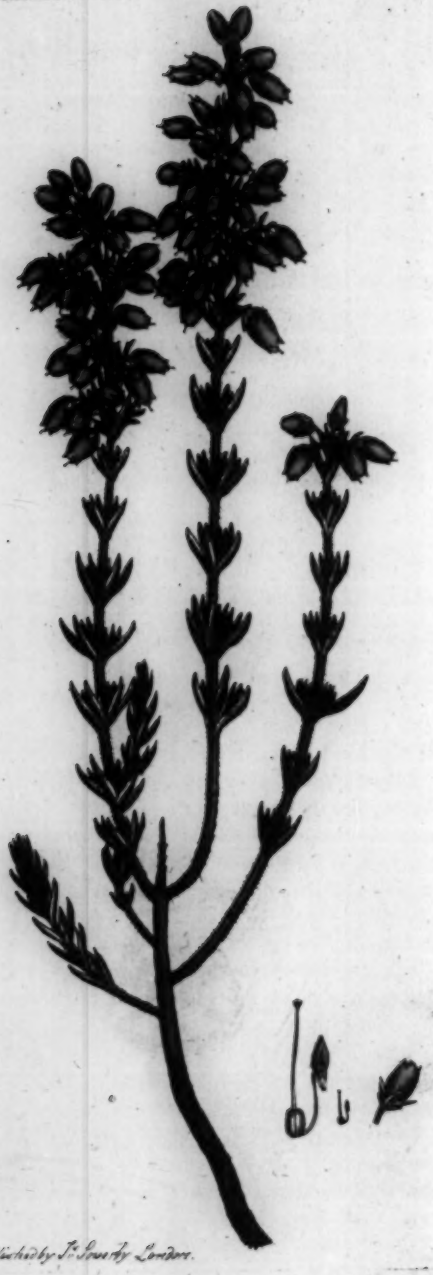
SPEC. CHAR. Antheræ bearded. Style nearly concealed. Corolla ovate. Leaves in fours, ciliated. Flowers in round heads.

SYN. Erica Tetralix. *Linn. Sp. Pl.* 502. *Sm. Fl. Brit.* 418. *Hudſ.* 166. *With.* 373. *Hull.* 84. *Relh.* 156. *Sibth.* 124. *Abbot.* 87. *Curt. Lond. faſc.* 1. *t.* 21. *Dickſ. H. Sicc. faſc.* 9. 4.

E. Brabantica, folio Coridis, hirſuto, quaterno. *Raii Syn.* 471.

THE Croſs-leaved Heath is perhaps the moſt beautiful of all our ſpecies, conſidering the extreme wax-like delicacy of its bloſſoms, which vary from deep roſe colour to every ſhade of carnation, and even to a pure white. It is leſs common than *E. vulgaris* or *cinerea*, and chiefly grows in moiſt boggy moſſy places, flowering in July and Auguſt.

The ſtems ſeldom riſe ſo high as the Common Ling, and are *determinatè ramoſi*, the branches ſpringing many from one centre. Leaves in fours, on ſtalks, ovate, revolute, ſprinkled with glandular rigid hairs. Flowers in round terminal heads, drooping to one ſide, reſembling a cluſter of berries. Calyx fringed, and furniſhed with 2 leaves or bracteæ at its baſe. Corolla elliptical, inflated, with a ſmall four-toothed orifice, not ſoon falling off, but ſhrinking before it fades, by which means the ſtyle, originally concealed, becomes prominent. Antheræ concealed, ovate, ſpurred. Stigma globular. The leaves and branches are often more or leſs downy. Capſule with partitions from the centre of its valves, as in *Andromeda*, a puzzling circumſtance for the philoſophical ſtudent of natural genera.



May 1802. Published by J. Sowerby, London.

ERICA cinerea.

Fine-leaved Heath.

OCTANDRIA Monogynia.

GEN. CHAR. *Cal.* 4-leaved. *Cor.* 4-cleft. *Stamina* inſerted into the receptacle. *Antheræ* with 2 pores. *Capſ.* ſuperior, of 4 cells. *Seeds* many.

SPEC. CHAR. Antheræ creſted. Style a little prominent. Stigma capitate. Corolla ovate. Leaves in threes.

SYN. Erica cinerea. *Linn. Sp. Pl.* 501. *Sm. Fl. Brit.* 418. *Hudſ.* 165. *With.* 374. *Hull.* 84. *Relh.* 156. *Sibth.* 125. *Abbot.* 87. *Curt. Lond. faſc.* 2. *t.* 25.

E. tenuifolia. *Raii Syn.* 471.

VERY frequent and abundant on heaths, even as much ſo as *E. vulgaris*, and contributing no leſs to the ornament of the country, flowering copiouſly in July and Auguſt, or later.

The above ſpecific character is given rather with a reference to the numerous foreign *Ericæ* than to our own; for the notched appendages, or creſts, at the baſe of the antheræ, found in no other Britiſh ſpecies, are therefore alone ſufficient to determine this. The ſtems are branched, a foot high or more, as in *E. vulgaris*. Leaves growing by threes, with tufts of young ones, on young branches, in their *axillæ*, linear-lanceolate, with a furrow on their backs, ſmooth. Flowers ranged in long whorled leafy ſpikes or cluſters, drooping, purpliſh-red. Calyx ſmooth, acute, with 2 leaves at its baſe. Corolla elliptical, leſs turgid than that of *E. Tetralix*, with 4 upright ſegments at the orifice. Stigma capitate, 4-notched. Partitions of the capſule from the centre of its valves, as in the laſt ſpecies.

This, like the 2 preceding, is ſometimes ſeen with pure-white flowers. It is remarkable that no *Erica* is known in America. The Cape of Good Hope abounds with moſt beautiful ſpecies, now frequent in our green-houſes.

Mayo 1st 1806 Published by J. Sowerby Lambeth

MEDICAGO falcata.

Yellow Medick.

DIADELPHIA Decandria.

GEN. CHAR. *Pod* compreſſed, ſpiral, forcing back the keel of the corolla from the ſtandard.

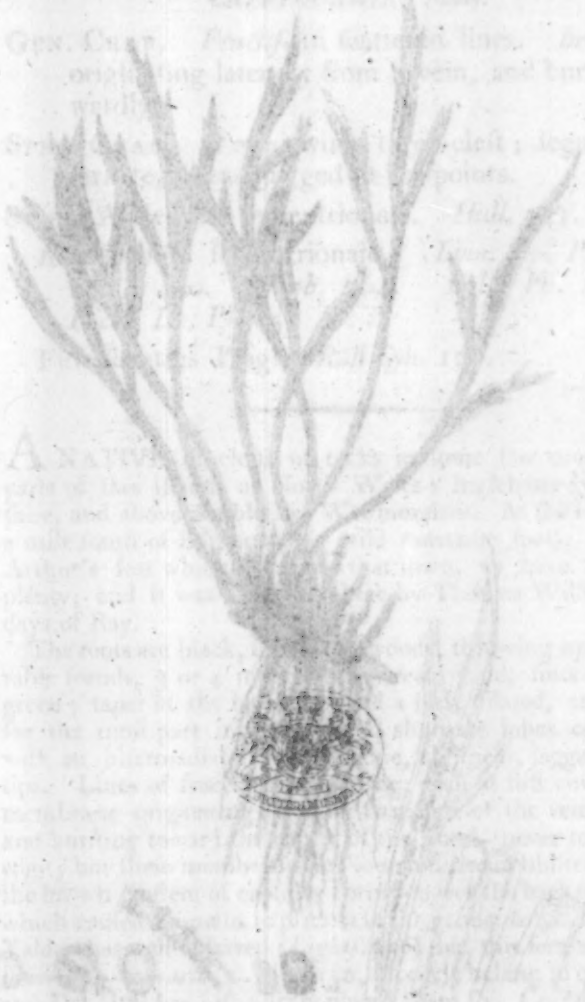
SPEC. CHAR. Flower-ſtalks racemoſe. Pods ſickle-ſhaped. Stem procumbent.

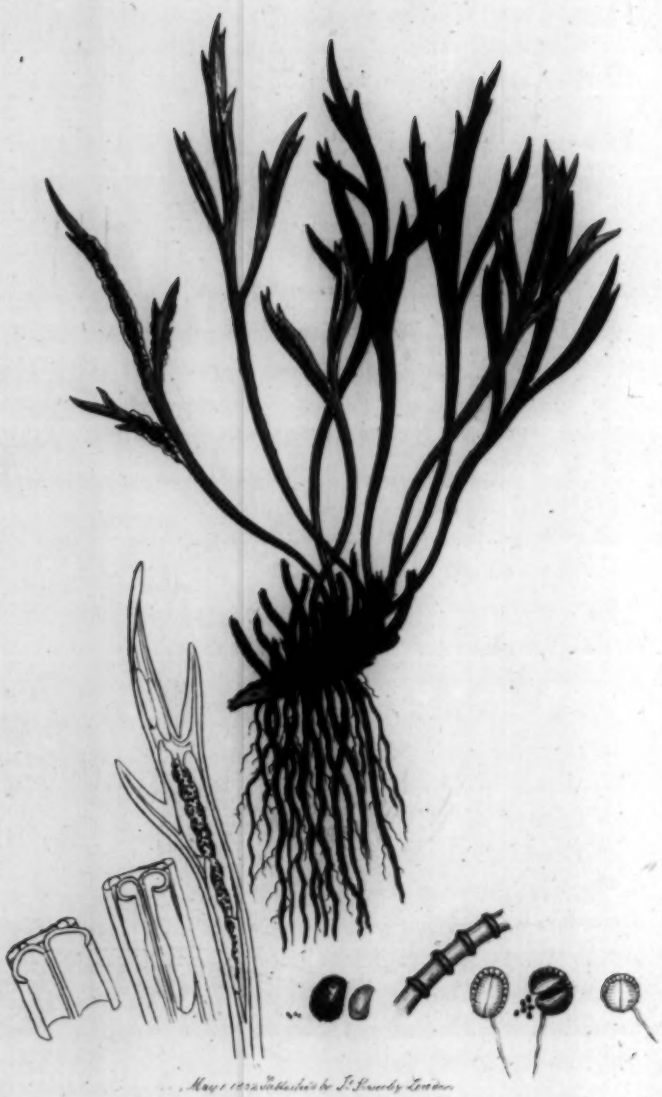
SYN. Medicago falcata. *Linn. Sp. Pl.* 1096. *Sm. Fl. Brit.* 796. *Hudſ.* 330. *With.* 658. *Hull.* 165. *Relh.* 285. *Mart. Fl. Ruſt. t.* 86 & 87.
Medica ſylveſtris. *Raii Syn.* 333.

THIS plant is confined to a gravelly or chalky ſoil, and is no where ſo abundant as about Norwich, in the borders of gravelly fields and on the city walls in many places. Mr. Relhan mentions ſeveral ſtations for it in Cambridgeſhire, but we have rarely ſeen it elſewhere. It is perennial, and flowers very copiouſly in July.

Root long, woody. Stems numerous, procumbent, widely ſpreading, round, hairy, leafy, branched. Leaves ternate; leaflets narrow-obovate, ſerrated towards the point. Stipulæ acute, joined to the foot-ſtalk. Flowers many together on a common ſtalk, and each on a partial ſlender one, bracteated at the baſe. Corolla generally pale yellow, but occaſionally violet, and often green, as it were from a combination of theſe 2 colours. Pods black, downy, ſickle-ſhaped, not twiſted into a ſcrew as in *M. ſativa*, to which this ſpecies is otherwiſe greatly allied. Seeds from 4 to 8.

The germen when young is held in a ſtraight poſition by the petals of the keel, but ſoon liberates itſelf with a ſpring, which ſerves to daſh the pollen about the ſtigma. See *Sm. Tracts*, 173. This ſpecies, like the *ſativa*, affords good food for cattle, but the poſition of its ſtems is leſs commodious for their feeding or for mowing.





May 1 1822 Published by J. Sowerby London.

ASPLENIUM ſeptentrionale.

Forked Spleenwort.

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructif.* in ſcattered lines. *Involucrum* originating laterally from a vein, and burſting inwardly.

SPEC. CHAR. Frond-wing three-cleft; ſegments alternate, linear, jagged at the points.

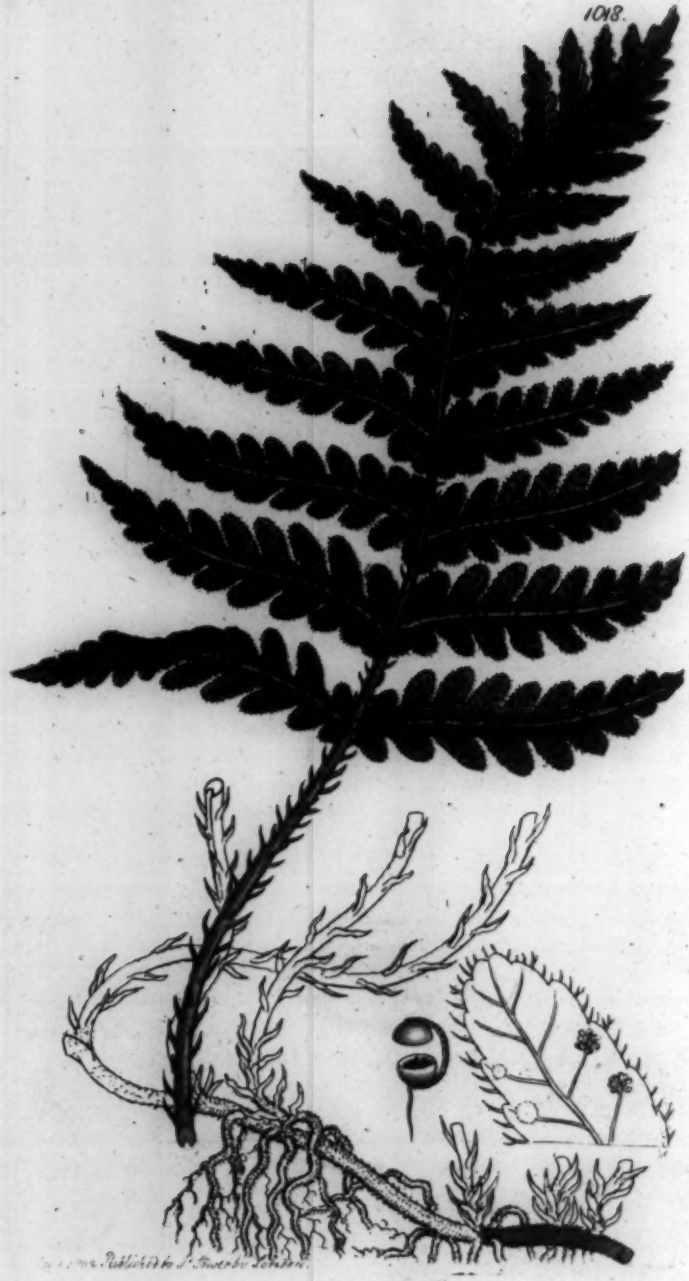
SYN. Aſplenium ſeptentrionale. *Hull.* 241.

Acroſtichum ſeptentrionale. *Linn. Sp. Pl.* 1524. *Hudſ.* 450. *With.* 764. *Bolt. Fil.* 12. *t.* 8. *Dickſ. Dr. Pl.* 45.

Filix ſaxatilis Tragi. *Raii Syn.* 120.

A NATIVE of clefts of rocks in ſome few mountainous parts of this iſland, as North Wales; Ingleborough, Yorkſhire, and above Ambleſide, Weſtmoreland. At the Hermitage a mile ſouth of Edinburgh (a wild romantic ſpot), and upon Arthur's ſeat which overlooks that town, we have ſeen it in plenty, and it was obſerved there by Thomas Williſel in the days of Ray.

The roots are black, tufted and woody, throwing up innumerable fronds, 3 or 4 inches high, erect, rigid, ſmooth, dark-green; taper at the baſe; upward a little dilated, and cloven for the moſt part into two lateral alternate lobes or leaflets, with an intermediate terminal one, all linear, jagged at their tips. Lines of fructification oblong, each at firſt covered by a membrane originating laterally from one of the veins or ribs, and burſting toward the centre of the frond, never toward the edge; but theſe membranes are ſoon reflexed or obliterated, and the brown cluſters of capſules entirely cover the back of the leaf, which cauſed Linnæus to place it in the genus *Acroſtichum*. Mr. Yalden has well obſerved (*Lightf.* 656) that this fern and *Aſplenium Ruta muraria*, *v.* 3. *t.* 150, properly belong to one genus, and Dr. Hull has firſt rightly placed them ſo. Correct generic principles, deduced from the involucrum, confirm the propriety of this arrangement.



Published by J. Sowerby London.

POLYPODIUM Thelypteris.

Marſh Polypody.

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* ſcattered, in roundiſh dots, not marginal. *Involucrum* umbilicated, burſting almoſt all round.

SPEC. CHAR. Frond pinnate; leaflets pinnatifid, ſomewhat crenate, ſeparate but croſſing each other at the baſe. Dots confluent.

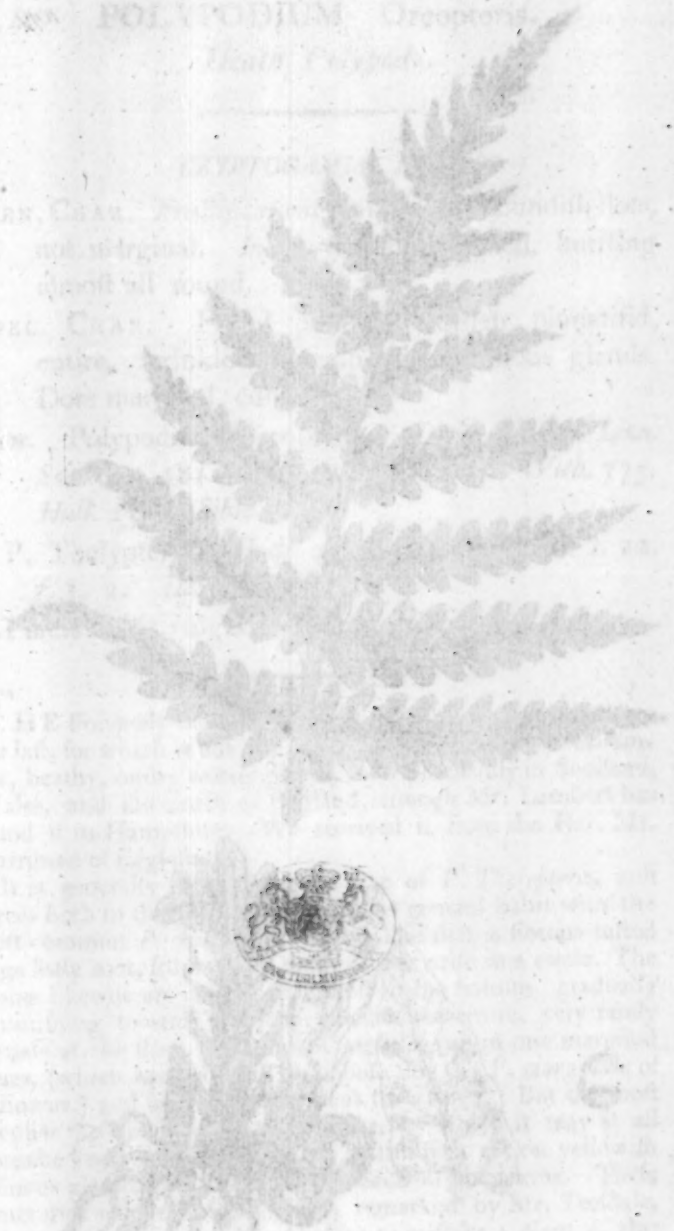
SYN. Polypodium Thelypteris. *Linn. Mant.* 505. *With.* 776. *Hull.* 239. *Abbot.* 227. *Dickſ. H. Sicc. faſc.* 6. 15.

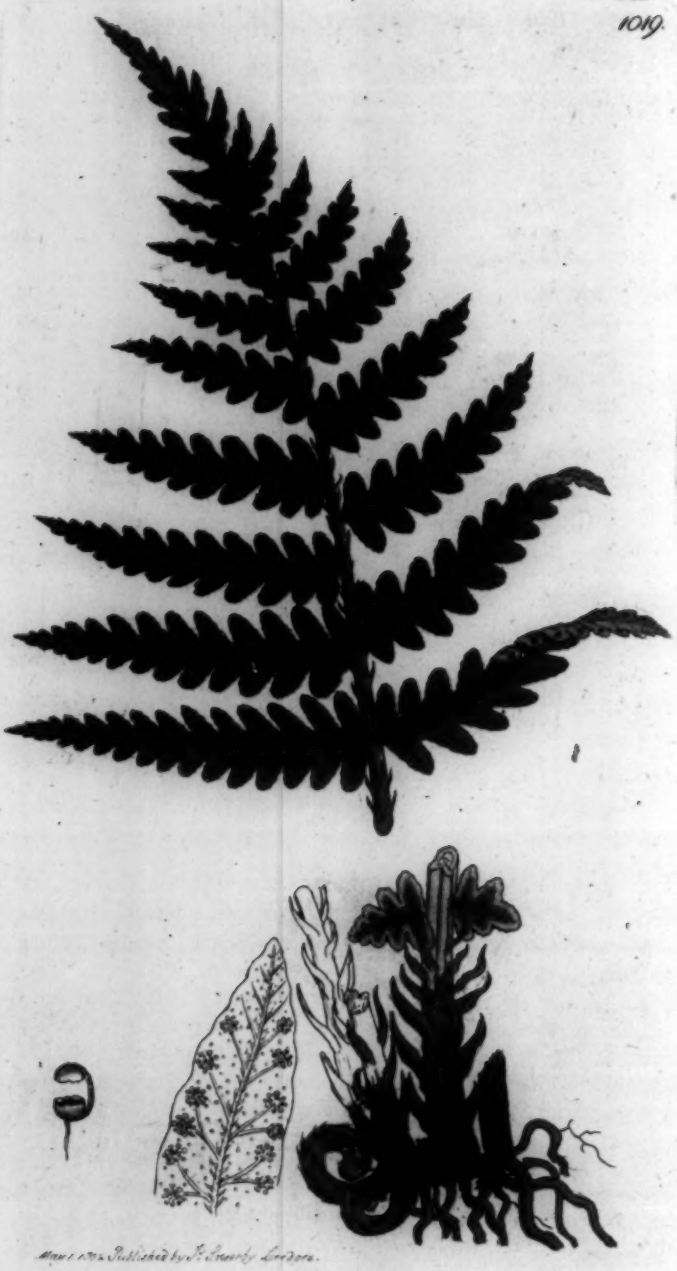
Acroſtichum Thelypteris. *Linn. Sp. Pl.* 1528. *Bolt. Fil.* 78. *t.* 43, 44.

Filix minor paluſtris repens. *Raii Syn.* 122.

THIS Fern is always found in wet ſpongy marſhes and bogs, but not frequently. Mr. Pitchford diſcovered it long ago on St. Faith's bogs near Norwich, and Mr. Turner lately at Lound near Yarmouth. It is alſo mentioned as growing in Bedfordſhire, Yorkſhire, and Scotland.

The root is long, ſlender, and creeps horizontally, producing ſeveral upright lanceolate fronds, ſcarcely more than a foot high, often leſs, of a bright green, with a longiſh, ſlender, almoſt entirely naked ſtalk. Leaflets oppoſite, ſpreading, ſeſſile, diſtinct, lanceolate, pointed, pinnatifid, generally ſmooth, ſometimes clothed with ſcattered hairs; the lobes are more or leſs crenate, bluntiſh, the lowermoſt of each leaflet lengthened out or divaricated ſo as to croſs thoſe of the oppoſite one. The ſpots of capſules are numerous, ſmall at firſt and each covered by a very thin white lacerated ſcale, but in proceſs of time they run together and nearly cover the leaf.—The ſlender creeping root, and the croſſing but ſeparate leaflets, diſtinguiſh this ſpecies of Polypody from every other with which it could be confounded.





May 1.1821. Published by J. Sowerby, London.

POLYPODIUM Oreopteris.

Heath Polypody.

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* ſcattered, in roundiſh dots, not marginal. *Involucrum* umbilicated, burſting almoſt all round.

SPEC. CHAR. Frond pinnate; leaflets pinnatifid, entire, ſprinkled beneath with reſinous glands. Dots marginal, confluent.

SYN. Polypodium Oreopteris. *Dickſ. Tr. of Linn. Soc. v.* 1. 181. *H. Sicc. faſc.* 1. 18. *With.* 775. *Hull.* 238. *Sibth.* 270.

P. Thelypteris. *Hudſ.* 457. *Bolt. Fil.* 40. *t.* 22. *f.* 1, 2. *Hedw. Theor.* 44. *t.* 6.

Filicis maris vulgaris varietas. *Raii Syn.* 122.

THE Polypody here repreſented, much more common than the laſt, for which it has often been taken, grows in mountainous, heathy, or dry woody places, moſt plentifully in Scotland, Wales, and the north of England, though Mr. Lambert has found it in Hampſhire. We received it from the Rev. Mr. Harriman of Eggleſton.

It is generally three times the ſize of *P. Thelypteris*, and agrees both in that particular as well as general habit with the moſt common *P. Filix mas*, having like that a fibrous tufted large ſcaly root, from which many fronds ariſe in a circle. The pinnæ likewiſe are continued almoſt to the bottom, gradually diminiſhing towards the root; their lobes entire, very rarely crenate at the tip. The dots of capſules run in one marginal ſeries, (which has led ſome to ſuppoſe this the *P. marginale* of Linnæus,) and become confluent as they ripen. But the moſt peculiar characteriſtic of this ſpecies, by which it may at all times be known from every other Britiſh fern, are the yellowiſh reſinous glands ſprinkled over the back of the leaves. Theſe ſometimes exhale a ſweet ſcent, remarked by Mr. Teeſdale, which probably cauſed Mr. Hudſon to miſtake a plant of this ſpecies for the *P. fragrans* of Linnæus.

TETRAPHIS pellucida.

Four-toothed Moſs.

CRYPTOGAMIA Muſci.

GEN. CHAR. *Capſule* oblong. *Fringe* ſimple, of 4 pyramidal, upright, ſeparate teeth.

SPEC. CHAR. . . . . .

SYN. Tetraphis pellucida. *Hedw. Sp. Muſc.* 45. *t.* 7. *f.* 1. *Swartz. Muſc. Suec.* 21. *Sibth.* 275.

Mnium pellucidum. *Linn. Sp. Pl.* 1574. *Hudſ.* 472. *With.* 799. *Hull.* 249. *Relh.* 398.

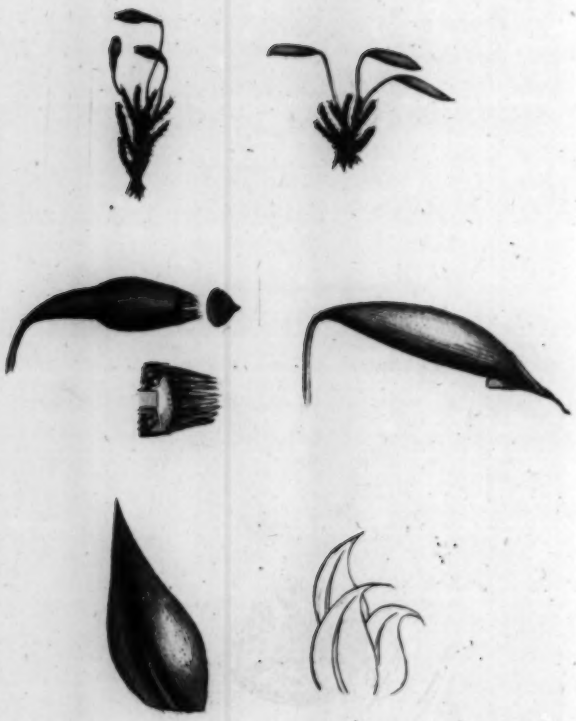
M. ſerpilli foliis tenuibus pellucidis. *Dill. Muſc.* 232. *t.* 31. *f.* 2.

M. minus non ramoſum, anguſtioribus et pellucidis foliis. *Dill. in Raii Syn.* 78.

Bryum pellucidum. *Abbot.* 237.

A NATIVE of wet ſhady places at the roots of trees, for ſpecimens of which we are obliged to Mr. Abbot. It flowers early in the ſpring, ripening its capſules in April or May.

Roots annual, tufted, ſhaggy with black or brown matted hairs. Stems ſimple, erect, clothed with alternate, ſeſſile, ovate or lanceolate, entire, pellucid, ſingle-ribbed, beardleſs leaves, various in breadth, the uppermoſt and lowermoſt gradually diminiſhing and remote. Male flower terminal, ſolitary, round, depreſſed, encircled with three or four large broad leaves. Sometimes, by Hedwig's deſcription, it ſeems to be abortive, and gemmiparous; at other times, in the early ſpring, hermaphrodite. Generally however the female flower terminates a different ſtem, and conſiſts of from 4 to 6 ſtyles, one of which only (as uſual) is fertile, and the oblong nearly upright capſule becomes elevated on a ſtraight ſlender ſtalk. The veil is torn at the baſe, orange-coloured at the tip. Lid conical, reddiſh, thin. Teeth 4, of a ſhining brown, erect, pyramidal, pointed, ſmooth, all ſeparate from top to bottom, by which the genus is clearly characterized, and this is its only known ſpecies.



May 1. 1803 Published by Jas Sowerby, London.

BRYUM Zierii.

Zierian Bryum.

CRYPTOGAMIA Muſci.

GEN. CHAR. *Fringe* double: *outer* of 16 teeth, broad at their baſe: *inner* a toothed membrane. *Flowers* terminal.

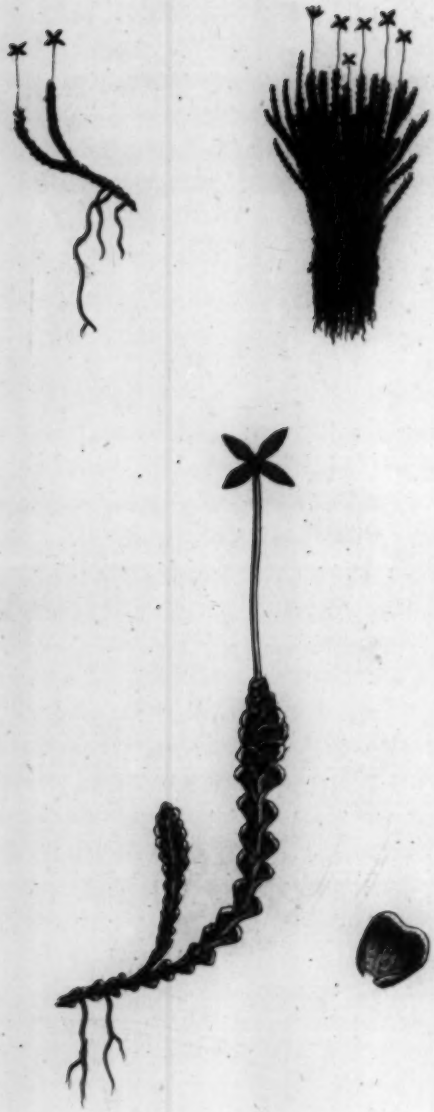
SPEC. CHAR. Stems branched after flowering. Leaves ovate, imbricated, concave, pointed. Capſules drooping, ovate, with a tapering baſe.

SYN. Bryum Zierii. *Dickſ. Crypt. faſc.* 2. 8. *t.* 4. *f.* 10. *H. Sicc. faſc.* 1. 19. *With.* 839. *Hull.* 256. *Hedw. Sp. Muſc.* 182. *t.* 44. *f.* 1—4.

WE are obliged to Mr. Griffith for Welch ſpecimens of this rare alpine moſs, never found by any other botaniſt except Mr. Dickſon, who in its ſpecific name has honoured the memory of his friend the learned and accurate Zier.

It grows in tufts upon moiſt banks. The leafy ſtems, ſhort and ſimple at firſt, become divided above the flowering ſummit, and are finally near an inch long. Leaves imbricated, ſmall, concave, ovate, entire, pointed, ribbed, bright-green at firſt, afterwards whitiſh or fleſh-coloured. Stalks capillary, about half an inch long, erect. Capſules drooping, club-ſhaped when green, but as they ripen they aſſume their true form, which is ovate, ſtanding on a tapering or club-ſhaped receptacle of their own length and brown colour. Veil reddiſh, entire, ſlender, tipped with the capillary remains of the ſtyle. Lid convex, pointed. Outer fringe of 16 ſharp red and yellow teeth: inner a laciniated membrane.

It appears to us that the immortal Hedwig, whoſe labour and ſkill in decyphering the characters of theſe curious vegetables cannot be too highly praiſed, has nevertheleſs laid too much ſtreſs on the minute differences of ſtructure in their inner fringe or *periſtomium internum*, and has thence made too many genera out of what we conſider as true *Brya*.



May 1. 1802. Published by Jas. Sowerby, London.

JUNGERMANNIA emarginata.

Notched Jungermannia.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male flowers ſeſſile.

Capſule on a ſtalk riſing from a ſheath, of 4 valves. *Seeds* attached to elaſtic filaments.

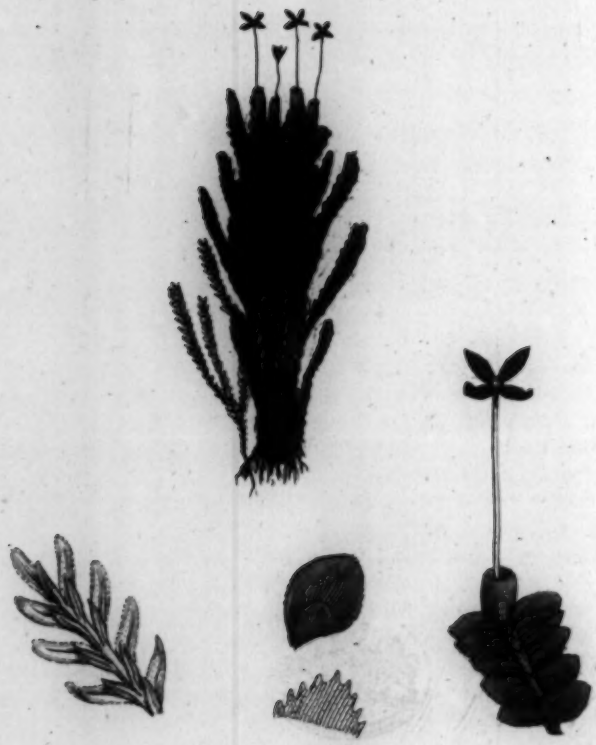
SPEC. CHAR. Stems ſimple or divided, erect. Flowers terminal. Leaves alternate, roundiſh, bluntly emarginate, entire, ſpreading, without auricles.

SYN. Jungermannia emarginata. *Ehrhart. Beitr. faſc.* 3. 80. *Schrad. Spicil.* 75.

J. macrorhiza. *Dickſ. Crypt. faſc.* 2. 16. *t.* 5. *f.* 10. *With.* 872. *Hull.* 278.

IT appears from the Linnæan herbarium that Dr. Swartz aſcertained and named this *Jungermannia* many years ago, before Profeſſor Ehrhart deſcribed it in his *Beiträge*. Mr. Dickſon, who firſt found it on the Scottiſh mountains, not having had any reaſon to think it already known, publiſhed it in his ſecond Faſciculus by the name of *macrorhiza*. Afterwards Mr. Griffith, who favoured us with theſe ſpecimens, diſcovered it in North Wales.

It grows in alpine moiſt ſtony ſituations, flowering early in ſummer; ſometimes on rocks in rivulets, when it becomes more luxuriant and of a darker green, loſing its purple tints. The roots are large, ſtrong and perennial. Stems erect, in tufts, either ſimple or divided at the baſe, clothed with alternate, rather ſpreading, concave, roundiſh, or ſomewhat wedge-ſhaped, leaves, perfectly entire in their margin, bluntly emarginate or nicked at their extremity, finely dotted with pellucid points when examined under a microſcope; their colour for the moſt part green at the baſe and edges, purple in the middle. No auricles or ſtipulæ accompany the leaves. The ſheath of the fructification we have always found terminal (Dr. Schrader mentions it as occaſionally lateral), blunt, entire. Stalk half an inch long, white. Capſule of four lanceolate brown valves.



May. 1. 1802. Published by Jas. Sowerby, London.

JUNGERMANNIA purpurea.

Purple Jungermannia.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male flowers ſeſſile.

Capſule on a ſtalk riſing from a ſheath, of 4 valves. *Seeds* attached to elaſtic filaments.

SPEC. CHAR. Stems nearly upright. Flowers terminal. Leaves two-ranked, ſpreading, roundiſh, auricled beneath; the uppermoſt finely toothed.

SYN. Jungermannia purpurea. *Scop. Carn. v.* 2. 347. *Hull.* 279.

J. cochleariformis. *With.* 876.

Mnium Jungermannia. *Linn. Sp. Pl.* 1579. *Hudſ.* 473.

Lichenaſtrum alpinum purpureum, foliis auritis et cochleariformibus. *Dill. Muſc.* 479. *t.* 69. *f.* 1.

L. trichomanis facie, prælongum, foliis concavis unam partem ſpectantibus. *Raii Syn.* 112.

GATHERED by Mr. Griffith in rivulets and bogs on the mountains of North Wales, where indeed it has long been known to grow; but the fructification, ſo perfect in his ſpecimens here delineated, has never been found before in Britain. Dillenius never ſaw the capſules, nor did Micheli, who only knew the plant by a ſpecimen Sherard ſent him. They are produced in dry ſummers only.

Roots perennial. Stems in tufts, 2 to 4 inches high, aſcending, or, when many together, erect, a little branched, thickly clothed with two ranks of ſpreading, rather concave leaves, very various in form, but generally roundiſh, obtuſe; the lowermoſt ſmaller and entire; the upper ones larger, and finely toothed; all more or leſs of a purple hue, and each leaf is accompanied by a ſmaller leaf or auricle, of its own figure, but not toothed. Starved or unhealthy plants have oblong entire leaves and auricles, of a pale or whitiſh hue, and could hardly be ſuppoſed the ſame ſpecies. The ſheaths are terminal, purple, cylindrical, entire, and very obtuſe. Stalk near an inch long when perfect, white and tender. Capſule brown, of 4 lanceolate valves.

We cannot but agree with Dr. Hull in preferring Scopoli's expreſſive name to the recent one of Withering. How ſtrange is it that Linnæus ſuppoſed this plant a *Mnium!*

May 1. 1802. Published by Jas. Sowerby, London.

JUNGERMANNIA julacea.

Silvery Alpine Jungermannia.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male flowers ſeſſile.

Capſule on a ſtalk riſing from a ſheath, of 4 valves.

Seeds attached to elaſtic filaments.

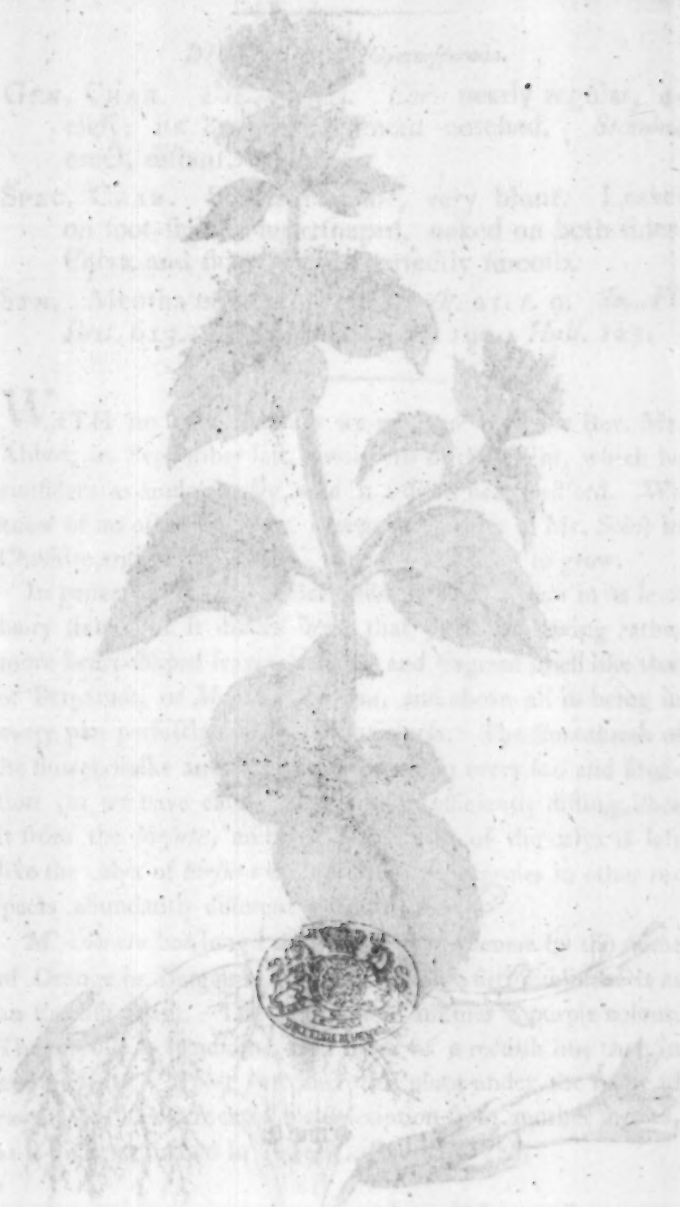
SPEC. CHAR. Branches cylindrical, clothed with ovate pointed concave entire leaves, cloſely imbricated on every ſide. Sheaths toothed.

SYN. Jungermannia julacea. *Linn. Sp. Pl.* 1601. *Hudſ.* 516. *With.* 881. *Hull.* 281. *Lightf.* 785.

Lichenaſtrum alpinum, bryi julacei argentei facie. *Dill. Muſc.* 506. *t.* 73. *f.* 38.

FOUND in rivulets on the Scottiſh and Welch mountains, alſo in the mountainous parts of Devonſhire, Weſtmoreland, &c. flowering in the latter part of ſummer, but rarely.

It forms denſe tufts of ramifying ſtems about an inch high, whoſe branches are alternate, ſlender, uniform, cylindrical, clothed on every ſide with cloſely imbricated leaves, which are ſmall, ovate, ſharply pointed, entire, without nerves, green with a bright ſilvery gloſs when freſh, brown when dry; the uppermoſt, as uſual in other ſpecies of *Jungermannia*, are largeſt, and envelop an ovate green terminal ſheath, whoſe margin is unequally torn or toothed, and from whence riſes a ſmall ſlender ſtalk, bearing the little brown capſule.—When dried the branches ſometimes aſſume a ſquare form, from the leaves being ranged in four rows.—We have never found the leaves cloven, though they ſometimes approach each other ſo as to look like one leaf with two points.



May 1 1812 Published by J. Sowerby London.

MENTHA odorata.

Bergamot Mint.

DIDYNAMIA Gymnoſpermia.

GEN. CHAR. *Cal.* 5-cleft. *Cor.* nearly regular, 4-cleft; its broadeſt ſegment notched. *Stamina* erect, diſtant.

SPEC. CHAR. Spikes capitate, very blunt. Leaves on foot-ſtalks, heartſhaped, naked on both ſides. Calyx and flower-ſtalks perfectly ſmooth.

SYN. Mentha odorata. *Sole Mentb.* 21. *t.* 9. *Sm. Fl. Brit.* 615. *Tr. of L. Soc. v.* 5. 192. *Hull.* 127.

WITH no ſmall pleaſure we received from the Rev. Mr. Abbot, in September laſt, ſpecimens of this Mint, which he conſiders as undoubtedly wild in a ditch near Bedford. We know of no other ſituation, except (according to Mr. Sole) in Cheſhire and North Wales, where it is known to grow.

In general form this ſpecies reſembles *M. birſuta* in its leaſt hairy ſtate, but it differs from that plant in having rather more heart-ſhaped leaves, a ſtrong and fragrant ſmell like that of Bergamot, or *Monarda didyma*, and above all in being in every part perfectly deſtitute of hairineſs. The ſmoothneſs of its flower-ſtalks and calyx, ſo conſtant in every ſoil and ſituation (as we have carefully obſerved) ſufficiently diſtinguiſhes it from the *birſuta*, and indeed the form of the calyx is leſs like the calyx of *birſuta* than of *piperita*, a ſpecies in other reſpects abundantly different from this.

M. odorata has long been known to gardeners by the name of Orange or Bergamot Mint. Mr. Sole firſt publiſhed it as an Engliſh plant. The herb often aſſumes a purple colour. The corolla is handſome, and more of a reddiſh hue than in moſt Mints. Miller intended this plant under the name of *rubra*, but has fabricated his deſcription from another ſpecies, as is fully explained in *Tr. of L. Soc. v.* 5. 188.

May 1. 1802 Published by Jas Sowerby, London.

MENTHA Pulegium.

Penny-royal.

DIDYNAMIA Gymnoſpermia.

GEN. CHAR. *Cal.* 5-cleft. *Cor.* nearly regular, 4-cleft; its broadeſt ſegment notched. *Stamina* erect, diſtant.

SPEC. CHAR. Flowers whorled. Leaves ovate. Stem proſtrate. Flower-ſtalks and calyx downy all over; the teeth fringed.

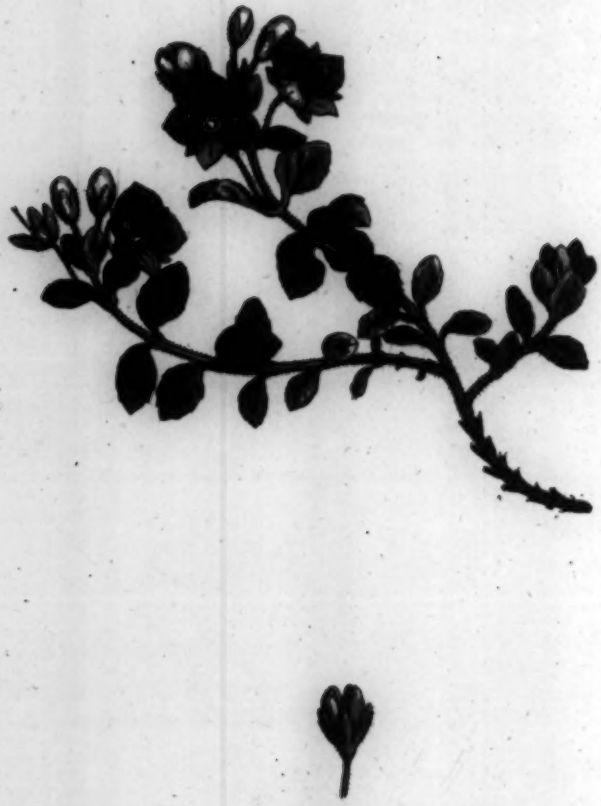
SYN. Mentha Pulegium. *Linn. Sp. Pl.* 807. *Sm. Fl. Brit.* 625. *Tr. of L. Soc. v.* 5. 216. *Hudſ.* 254. *With.* 525. *Hull.* 130. *Relh.* 224. *Sibth.* 182. *Woodv. Med. Bot. t.* 171. *Sole Mentb.* 51. *t.* 23.

Pulegium. *Raii Syn.* 235.

PENNY-ROYAL, long celebrated among medical practitioners for removing obſtructions of various kinds, ſtrengthening the viſcera, and other ſtimulant or tonic powers, is conſequently frequent in gardens. In a wild ſtate it leſs generally occurs; but may now and then be found on wet commons, eſpecially on a ſtrong ſoil, flowering in September, the uſual ſeaſon for Mints.

This is the ſmalleſt we have of its genus, and may be known by that circumſtance, its proſtrate ſtems, ſmall downy recurved leaves, which are often quite entire, and numerous denſe whorls of purpliſh (ſometimes white) flowers. It is more peculiarly diſtinguiſhed from our other *Menthæ* by the ſhort ſoft downineſs of its flower-ſtalks and calyx. The hairs of the latter indeed vary ſomewhat in length, and its teeth are always ſtrongly ciliated.

The ſmell of this ſpecies is peculiarly ſtrong and pungent, unlike that of any other Britiſh Mint, and more reſembling *Thymus Nepeta, Fl. Brit.*



June 1.1812. Published by J. Sowerby, London.

VERONICA ſaxatilis.

Blue Rock Speedwell.

DIANDRIA Monogynia.

GEN. CHAR. *Cor.* inferior, of 1 petal, 4 cleft, wheel-ſhaped; lower diviſion narroweſt. *Capſ.* 2-celled.

SPEC. CHAR. Corymbus terminal, of few flowers. Leaves elliptical. Stems ſpreading. Capſule ovate, of four valves.

SYN. Veronica ſaxatilis. *Linn. Suppl.* 83. *Sm. Fl. Brit.* 17. *Dickſ. Crypt. faſc.* 2. 29. *With.* 14. *Hull.* 4. *Scop. Carn. v.* 1. 11.

V. fruticuloſa. *Hudſ.* 4?

V. fruticans ſerpyllifolia. *Ger. em.* 628.

SENT from the highland mountain of Ben Lawers by Mr. G. Donn and Mr. J. Mackay. It is perennial and even ſhrubby, flowering in July.

The roots run deep into fiſſures of rocks, and the woody branching entangled ſtems form ſmall tufts, from whence the ſimple leafy round downy flowering-branches, 3 or 4 inches long, ſpread in every direction. The leaves are oppoſite, ſmall, elliptical or oblong, blunt, always entire at their baſe and extremity, but often ſerrated in ſome degree about their middle. They are a little thick or fleſhy, ſmooth, of a dull darkiſh green, turning black when dry. From 3 to 6 large handſome dark-blue flowers grow in a ſhort terminal corymbus, whoſe ſtalks are twice or thrice as long as their correſponding floral leaves. Calyx in 4 nearly equal blunt downy ſegments. Orifice of the corolla elegantly tinged with red. Capſule longer than the calyx, ovate, downy, ſplitting as it ripens into 4 lanceolate valves, ſo that the fruit differs much from the heart-ſhaped form of our moſt common ſpecies.

This beautiful little plant has long been known in the more curious Engliſh gardens by the name of *V. fruticuloſa*, with which many botaniſts (even Linnæus, Haller, and Jacquin originally) have been accuſtomed to confound it; how unjuſtly will appear in our next plate.

June 1, 1802. Published by J. Sowerby, London.

VERONICA fruticulosa.

Flesh-coloured Shrubby Speedwell.

DIANDRIA Monogynia.

GEN. CHAR. *Cor.* inferior, of 1 petal, 4-cleft, wheel-shaped; lower division narrowest. *Capſ.* 2-celled.

SPEC. CHAR. Corymbus terminal, spiked, many-flowered. Leaves elliptic-lanceolate. Stems erect. Capsule ovate, of four valves.

SYN. Veronica fruticulosa. *Linn. Sp. Pl.* 15. *Mant.* 316. *Sm. Fl. Brit.* 18.

V. frutescens. *Scop. Carn. v.* 1. 19.

V. n. 545. *Hall. Hist. v.* 1. 235. *t.* 16. *f.* 1.

THE Rev. Dr. Walker first observed this plant in Scotland, and communicated it to me in 1782. It has been found with the preceding upon Ben Lawers, flowering at the same season.

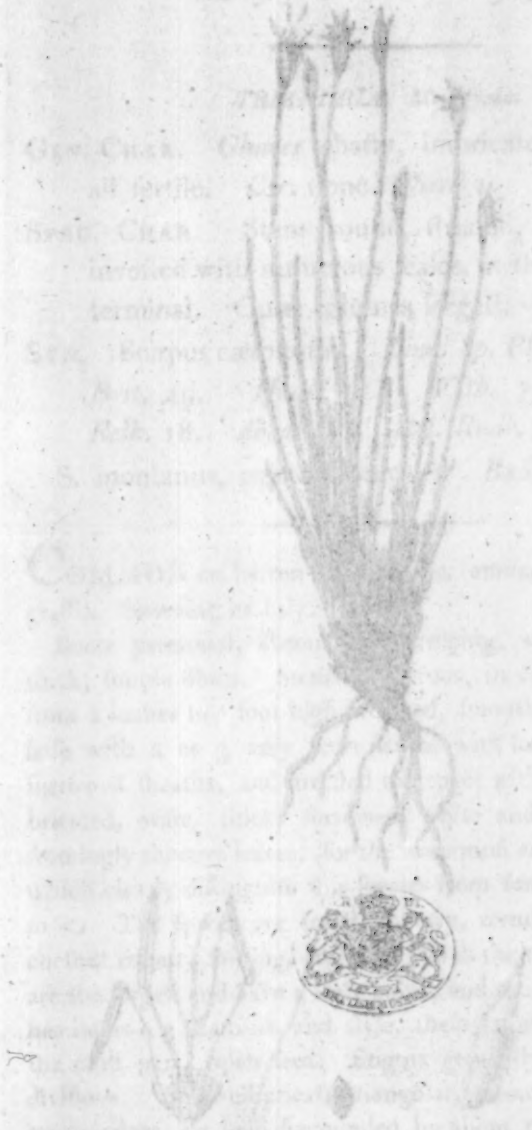
In strong woody roots, and stems branching and intricate at their base, it agrees with the last; but the flowering-branches are perfectly upright, 6 inches or more in height, each bearing a spike (rather than a corymbus) of a considerable number of flowers, whose corolla is flesh-coloured, never blue, and whose stalks scarcely at all exceed their *bracteæ* in length. The leaves also are rather paler, much more numerous, oblong, a little downy at their edges and veins. They are sometimes quite entire, sometimes crenate or serrated, being in that particular liable to vary greatly. The capsule and calyx agree much with those of *V. saxatilis*, and the flower-stalks are lengthened out as the fruit ripens; but never in so great a degree as in that species.

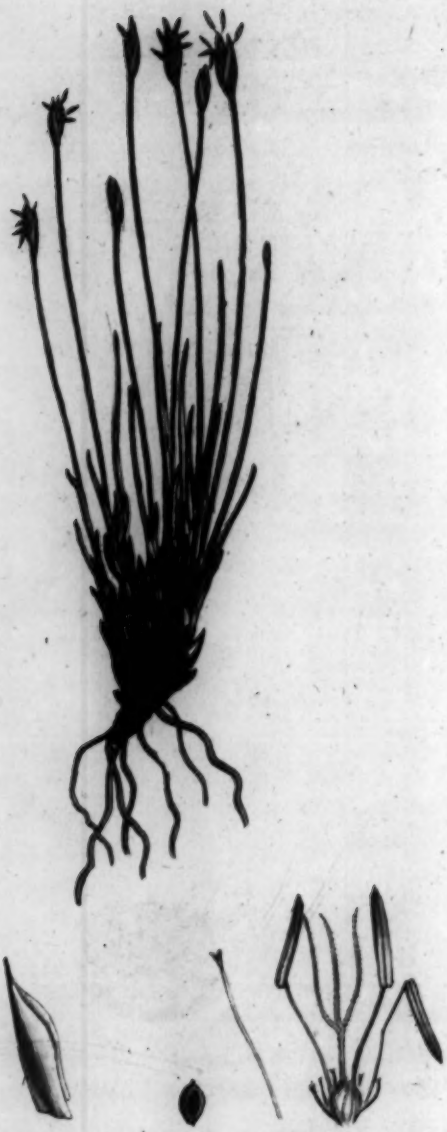
In both these kinds of Speedwell the flowering branches are merely annual, though the stem below is woody and truly perennial, so that the latter ought rather to be esteemed the naked crown of the root.

The synonym of Morison, quoted by Scopoli, clearly belongs to *V. saxatilis*.

CLX. SCIRPUS *setiformis*.

Scaly-footed Club-rush.





June 1. 1802. Published by Jas Sowerby, London.

SCIRPUS cæſpitoſus.

Scaly-ſtalked Club-ruſh.

TRIANDRIA Monogynia.

GEN. CHAR. *Glumes* chaffy, imbricated every way, all fertile. *Cor.* none. *Seed* 1.

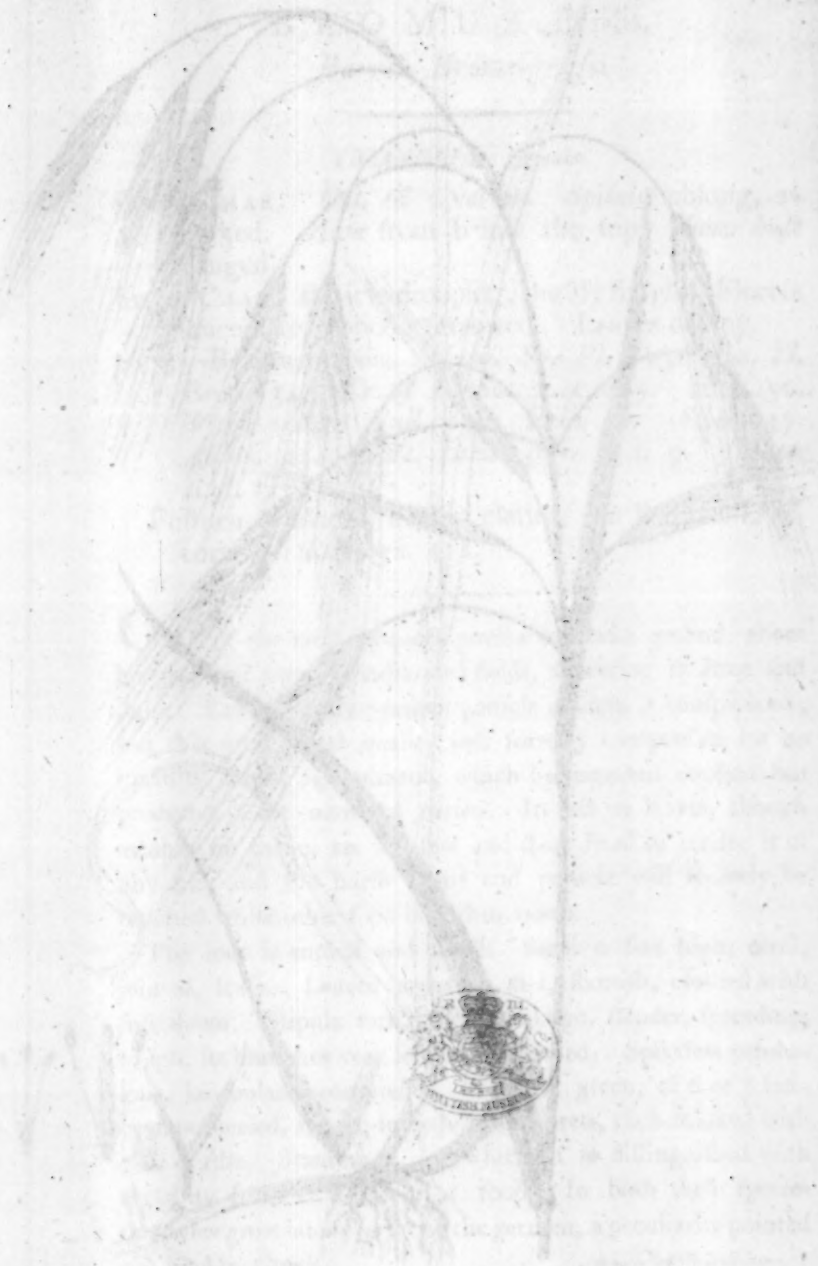
SPEC. CHAR. Stem round, ſtriated, ſheathed, and inveſted with numerous ſcales, at the baſe. Spike terminal. Outer glumes largeſt.

SYN. Scirpus cæſpitoſus. *Linn. Sp. Pl.* 71. *Sm. Fl. Brit.* 49. *Hudſ.* 17. *With.* 73. *Hull.* 13. *Relh.* 18. *Abbot.* 10. *Rel. Rudb. t.* 28. *f.* 1.

S. montanus, capitulo breviori. *Raii Syn.* 429.

COMMON on barren turfy heaths; among ling and coarſe graſſes, flowering in July.

Roots perennial, fibrous, not creeping, of many zigzag, thick, ſimple fibres. Stems numerous, in denſe tufts, erect, from 2 inches to a foot high, ſtriated, ſmooth; clothed at the baſe with 2 or 3 very ſhort leaves with long membranous furrowed ſheaths, and inveſted moreover with numerous, imbricated, ovate, thick, furrowed, white and ſhining ſcales, ſeemingly abortive leaves, (for the innermoſt are often pointed,) which clearly diſtinguiſh this ſpecies from ſome nearly related to it. The ſpikes are ſmall, ſolitary, terminal, of a reddiſh cheſnut colour, ſhining, erect, of which the two outer glumes are the largeſt and have a leafy point; and though every glume has its own 3 ſtamina and ſtyle, theſe larger ones only, for the moſt part, ripen ſeed. Stigma generally in 3, rarely 4, diviſions. Seed elliptical, triangular, ſmooth, brown with green edges, its baſe ſurrounded by about 6 briſtles, rather longer than the ſeed, forked at their points.



...1802. Published by J. Sowerby.

BROMUS ſterilis.

Barren Brome-graſs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner huſk* fringed.

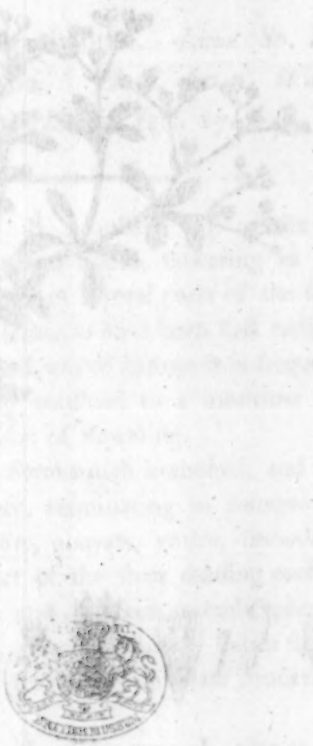
SPEC. CHAR. Panicle drooping, moſtly ſimple. Florets lanceolate, ribbed, furrowed. Leaves downy.

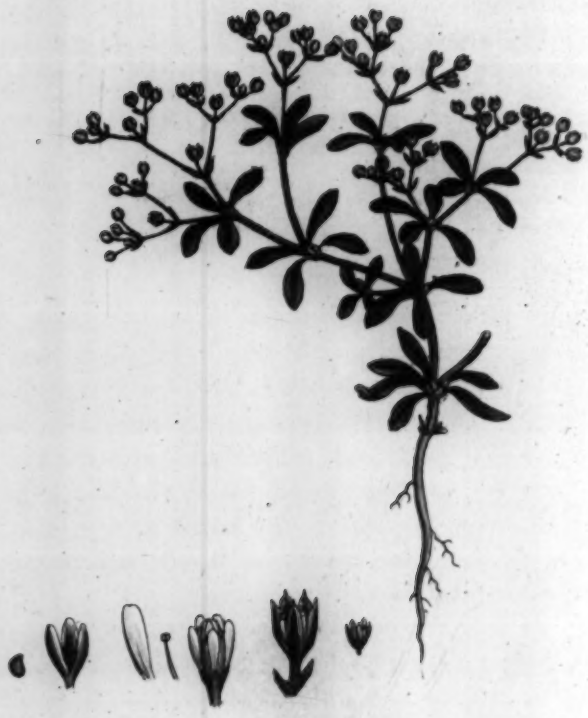
SYN. Bromus ſterilis. *Linn. Sp. Pl.* 113. *Sm. Fl. Brit.* 134. *Tr. of L. Soc. v.* 4. 295. *Hudſ.* 50. *With.* 162. *Hull.* 25. *Relh.* 46. *Sibth.* 47. *Abbot.* 23. *Curt. Lond. faſc.* 1. *t.* 9. *Mart. Ruſt. t.* 125.

Feſtuca avenacea ſterilis elatior, ſeu Bromos Dioſcoridis. *Raii Syn.* 412.

ONE of the moſt frequent graſſes in waſte ground, about hedges, and even in cultivated fields, flowering in June and July. The elegantly pendent panicle renders it conſpicuous; but this ornamental quality will ſcarcely compenſate for its inutility to the agriculturiſt, which by common conſent has procured it the name of *ſterilis*. In fact its leaves, though eatable for cattle, are too few and ſhort-lived to render it of any uſe, and the harſh ſtems and panicle will ſcarcely be touched while other food is within reach.

The root is annual and ſmall. Stem 2 feet high, erect, jointed, leafy. Leaves ſpreading, flat, ſhortiſh, clothed with ſoft down. Stipula torn. Panicle large, ſlender, ſpreading, rough, its branches very ſeldom ſubdivided. Spikelets pendulous, lanceolate, compreſſed, browniſh green, of 6 or 8 lanceolate, keeled, rough, long-bearded florets, each marked with 7 or 9 ribs. Stamina 3, by which it is diſtinguiſhed with certainty from *B. diandrus*, *t.* 1006. In both theſe ſpecies the ſtyles grow laterally out of the germen, a peculiarity pointed out by Mr. Curtis.





May 1.1802. Published by J.T. Sowerby London.

POLYCARPON tetraphyllum.

Four-leaved All-ſeed.

TRIANDRIA Trigynia.

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5, ovate, minute. *Capſ.* of 1 cell and 3 valves. *Seeds* numerous.

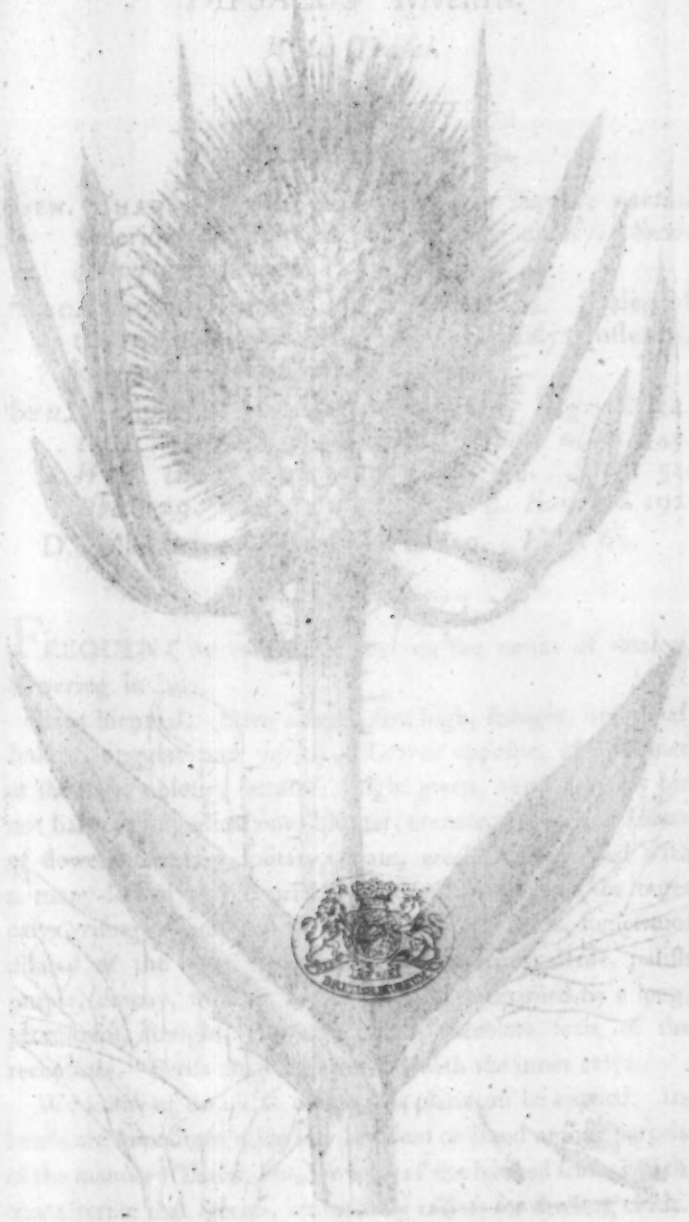
SPEC. CHAR. . . . . .

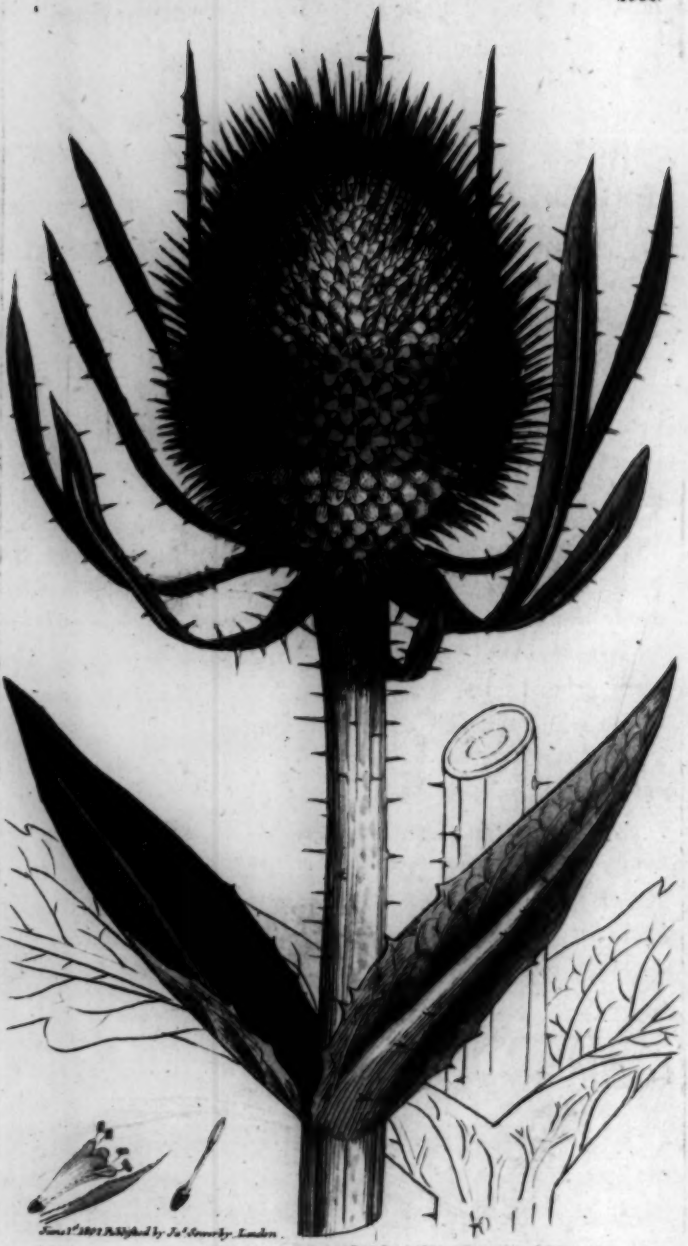
SYN. Polycarpon tetraphyllum. *Linn. Sp. Pl.* 131. *Sm. Fl. Brit.* 162. *Hudſ.* 60. *With.* 176. *Hull.* 30. *Dickſ. H. Sicc. faſc.* 17. 6.

GATHERED by A. B. Lambert, eſq. on the beach at Weymouth towards Portland iſland, flowering in the latter part of ſummer. It grows on ſeveral parts of the ſouth-weſt coaſt of England, and ſeems to have been firſt noticed there by Mr. Hudſon. In the ſouth of Europe it is frequent in dry waſte ground, not being confined to a maritime ſituation, nor to any particular ſeaſon of flowering.

Root ſmall, annual. Stem much branched, and ſpreading flat on the ground, leafy, terminating in numerous forked panicles. Leaves oppoſite, obovate, entire, ſmooth, a little fleſhy, in the lower part of the ſtem croſſing each other in double pairs. Stipulæ and bracteæ membranous, white, pointed. Flowers ſmall, greeniſh-white. Petals ſhorter than the calyx, blunt. Fruit of 3 ovate or lanceolate concave poliſhed valves.

This genus belongs to the ſame natural order as *Stellaria*, *Ceraſtium*, &c. nor (as its ſtipulæ and leaves would at firſt ſight lead us to ſuſpect) is it allied to *Illecebrum*. The *Donatia* of Forſter is ſurely without any reaſon referred by the younger Linnæus to *Polycarpon*, from which its 3-leaved calyx, 9 petals, and totally different habit (whatever its fruit may prove when known) keep it widely ſeparate.





June 1st 1801 Published by Jas Sowerby London.

DIPSACUS ſylveſtris.

Wild Teaſel.

TETRANDRIA Monogynia.

GEN. CHAR. *General calyx* of many leaves; *partial* ſuperior, of one leaf. *Receptacle* chaffy. *Seed-crown* cup-ſhaped.

SPEC. CHAR. Leaves oppoſite, ſerrated. Scales of the receptacle ſtraight. General calyx inflexed, longer than the head of flowers.

SYN. Dipſacus ſylveſtris. *Linn. Syſt. Veg. ed.* 14. 143. *Sm. Fl. Brit.* 168. *Hudſ. ed.* 1. 49. *With.* 182. *Hull.* 33. *Relh.* 58. *Sibth.* 54. *Abbot.* 29. *Curt. Lond. faſc.* 3. *t.* 9. *Raii Syn.* 192.

D. fullonum α. *Linn. Sp. Pl.* 140. *Hudſ.* 61.

FREQUENT by road-ſides, and on the banks of ditches, flowering in July.

Root biennial. Stem about 4 feet high, ſtraight, branched, hollow, angular and prickly. Leaves oppoſite, often joined at the baſe, oblong, ſerrated, bright green, veiny, prickly but not hairy; the radical ones blunter, crenate, depreſſed. Heads of flowers terminal, ſolitary, ovate, erect, encompaſſed with a many-leaved linear prickly inflexed involucrum, or outer calyx, riſing generally above the uppermoſt flowers, ſometimes dilated at the ends. Flowers very numerous, denſe, paliſh purple, downy, tubular, 4-cleft, each accompanied by a long, prominent, ſtraight, pungent, linear-lanceolate ſcale of the receptacle. Seeds angular, crowned with the inner calyx.

We know of no uſe to which this plant can be applied. Its heads are ſometimes mixed by accident or fraud among parcels of the manured Teaſel, but, for want of the hooked ſcales which characterize that ſpecies, are entirely uſeleſs for dreſſing cloth.

May 1, 1822. Published by J. Sowerby, London.

CHENOPODIUM Bonus Henricus.

Perennial Gooſefoot.

PENTANDRIA Digynia.

GEN. CHAR. *Cal.* 5-cleft, inferior. *Cor.* none. *Seed* 1, lenticular, inveſted with the cloſed five-ſided calyx.

SPEC. CHAR. Leaves triangular-arrowſhaped, entire. Spikes compound, leafleſs.

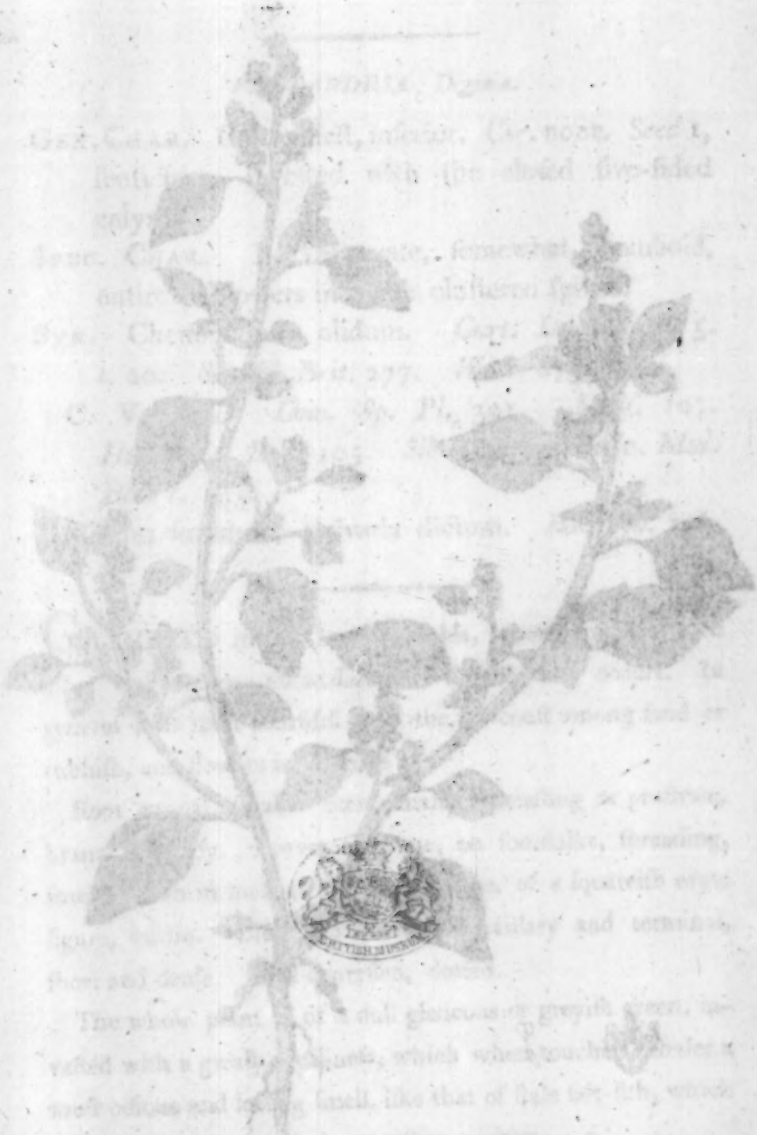
SYN. Chenopodium Bonus Henricus. *Linn. Sp. Pl.* 318. *Sm. Fl. Brit.* 272. *Hudſ.* 104. *With.* 270. *Hull.* 56. *Relh.* 102. *Sibth.* 87. *Abbot.* 54. *Curt. Lond. faſc.* 3. *t.* 17.

Blitum perenne, Bonus Henricus dictum. *Raii Syn.* 156.

PERENNIAL, flowering from May to the end of ſummer, by which it is diſtinguiſhed from other Britiſh plants of its genus, which are all annuals, flowering for the moſt part late in the autumn. *Perenne* would ſurely have been a much better ſpecific name than the old *Bonus Henricus*, for the retaining which we can offer no other excuſe than its extreme fooliſhneſs, which renders it impoſſible to be ever forgotten.

This plant frequently occurs in waſte ground about villages, farm-yards and cottages. Its root is fleſhy and branched. Stems ſpreading from the baſe, then erect, a foot high, branched below, leafy, ſtriated. Leaves alternate, on ſtalks, gradually ſmaller upwards, triangular-haſtate, or ſomewhat arrow-ſhaped, acute, entire, clothed with unctuous mealineſs, eſpecially beneath. Spikes numerous, axillary and terminal, erect, denſe, compound, deſtitute of the ſmall leaves which in ſome ſpecies grow among their lobes. Flowers mealy, green, ſome of them frequently wanting the ſtamina. Calyx bordered with an abrupt membrane. Styles often 3. Seed kidney-ſhaped.

The young herb boiled is a good ſubſtitute for Spinach, and is in ſome places cultivated for the table.



May 1. 1802. Published by J.t. Sowerby, London.

CHENOPODIUM olidum.

Stinking Gooſefoot.

PENTANDRIA Digynia.

GEN. CHAR. *Cal.* 5-cleft, inferior. *Cor.* none. *Seed* 1, lenticular, inveſted with the cloſed five-ſided calyx.

SPEC. CHAR. Leaves ovate, ſomewhat rhomboid, entire. Flowers in denſe cluſtered ſpikes.

SYN. Chenopodium olidum. *Curt. Lond. faſc.* 5. *t.* 20. *Sm. Fl. Brit.* 277. *With.* 273.

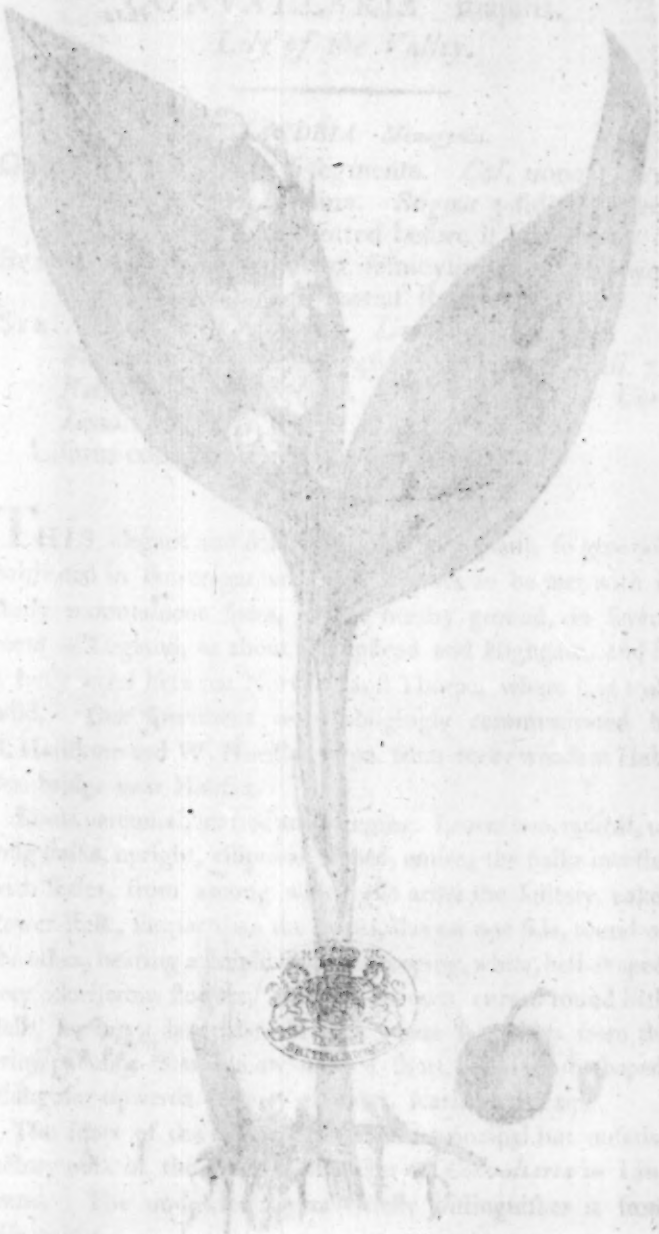
C. Vulvaria. *Linn. Sp. Pl.* 321. *Hudſ.* 107. *Hull.* 56. *Relh.* 105. *Sibth.* 89. *Woodv. Med. Bot. t.* 145.

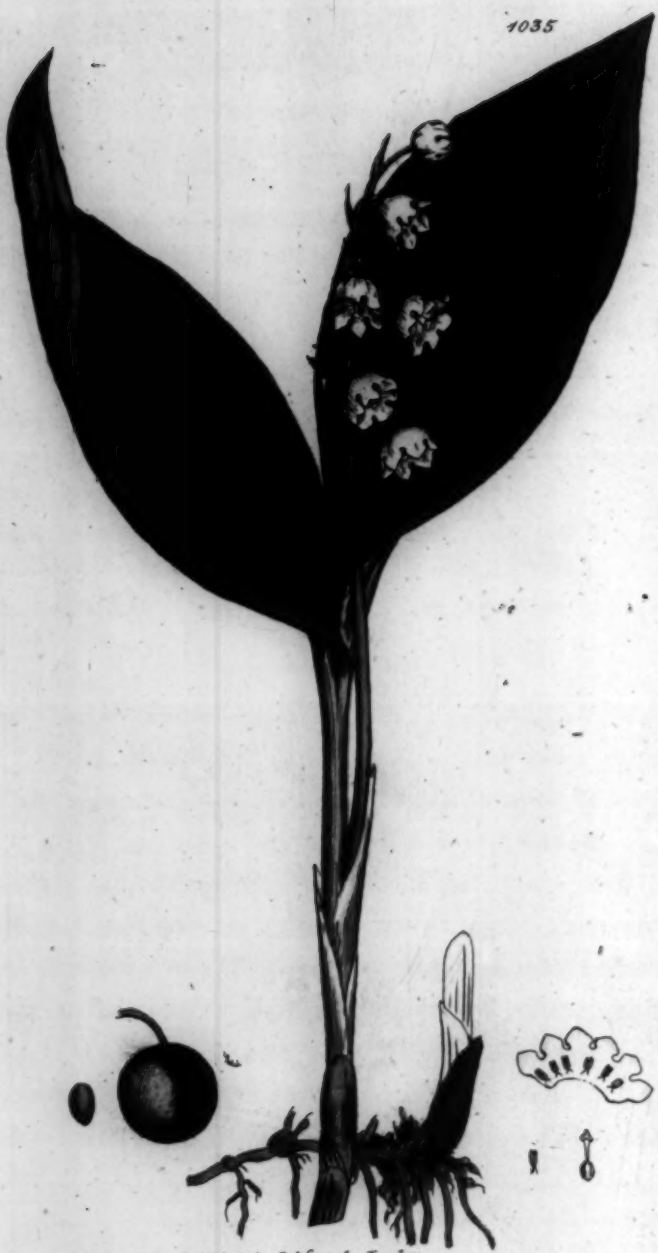
Blitum fœtidum, Vulvaria dictum. *Raii Syn.* 156.

GATHERED in St. George's fields, where, as well as in other waſte places about London, it frequently occurs. In general it is moſt plentiful near the ſea-coaſt among ſand or rubbiſh, and flowers in Auguſt.

Root annual, ſmall. Stems many, ſpreading or proſtrate, branched, leafy. Leaves alternate, on footſtalks, ſpreading, ſmaller than in moſt of the ſame genus, of a ſquareiſh ovate figure, entire. Cluſters interrupted, axillary and terminal, ſhort and denſe. Seed depreſſed, dotted.

The whole plant is of a dull glaucous or greyiſh green, inveſted with a greaſy mealineſs, which when touched exhales a moſt odious and laſting ſmell, like that of ſtale ſalt-fiſh, which Lobel tells us is peculiarly attractive to dogs.





June 1. 1802. Published by Jas. Sowerby, London.

CONVALLARIA majalis.
Lily of the Valley.

HEXANDRIA Monogynia.

GEN. CHAR. *Cor.* in 6 ſegments. *Cal.* none. *Style* longer than the ſtamina. *Stigma* 3-fided. *Berry* ſuperior, 3-celled, ſpotted before it is ripe.

SPEC. CHAR. Stalk naked, ſemicylindrical. Flowers ſpiked, drooping, on partial ſtalks.

SYN. Convallaria majalis. *Linn. Sp. Pl.* 451. *Sm. Fl. Brit.* 370. *Hudſ.* 146. *With.* 341. *Hull.* 72. *Relh.* 138. *Sibth.* 111. *Abbot.* 76. *t.* 2. *Curt. Lond. faſc.* 5. *t.* 24.

Lilium convallium. *Raii Syn.* 264.

THIS elegant and delightfully fragrant plant, ſo generally cultivated in flower-gardens, is ſometimes to be met with in ſhady mountainous ſpots, or on heathy ground, in ſeveral parts of England, as about Hampſtead and Highgate, and in a holly wood between Norwich and Thorpe, where it is truly wild. Our ſpecimens were obligingly communicated by S. Hailſtone and W. Hurſtler, eſqrs. from rocky woods at Hebden bridge near Halifax.

Roots perennial, matted and creeping. Leaves two, radical, on long ſtalks, upright, elliptical, ribbed, entire; the ſtalks inveſted with ſcales, from among which alſo ariſes the ſolitary naked flower-ſtalk, ſhorter than the leaves, flat on one ſide, round on the other, bearing a ſimple ſpike of drooping, white, bell-ſhaped, very odoriferous flowers, each on its own curved round little ſtalk, having a lanceolate bractea where it ſprings from the principal one. Stamina awl-ſhaped, ſhort. Style club-ſhaped, triangular upwards. Berry globular, ſcarlet when ripe.

The ſpots of the unripe fruit make a principal but unſatisfactory part of the generic character of *Convallaria* in Linnæus. The undivided ſtigma chiefly diſtinguiſhes it from *Aſparagus*.

June 1. 1802. Published by Jas. Sowerby, London.

PHASCUM axillare.

Lateral-fruited Earth-Moſs.

CRYPTOGAMIA Muſci.

SPEC. CHAR. *Capſule* ovate, without any ſeparate lid, deciduous. *Veil* minute, deciduous.

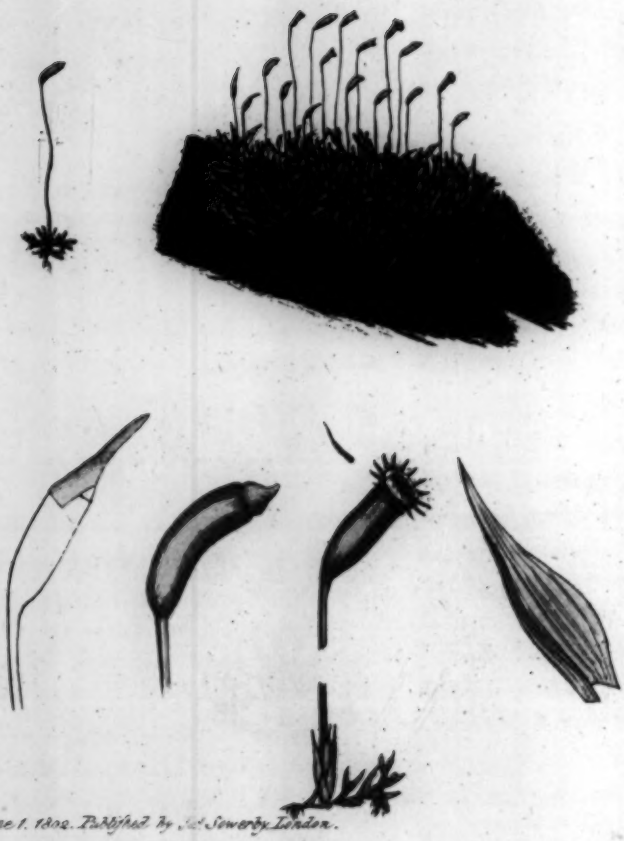
SPEC. CHAR. Stem ſimple, leafy. Leaves awl-ſhaped, keeled, ſpreading. Fruit-ſtalk lateral. Capſule elliptical, drooping.

SYN. Phaſcum axillare. *Dickſ. Crypt. faſc.* 1. 2. *t.* 1. *f.* 3.

P. nitidum. *Hedw. Crypt. v.* 1. 91. *t.* 34. *Sp. Muſc.* 19. *With.* 787. *Hull.* 252.

FIRST diſcovered by Mr. Dickſon in moiſt places upon heaths. We gathered theſe ſpecimens in Kenſington gardens early in March.

The root is fibrous. Stem ſolitary, ſimple, leafy, flowering when about a line in height; but being immediately extended two or three lines higher in one ſimple continued branch, the fruit-ſtalk becomes lateral, or apparently axillary; and this circumſtance affording a peculiar and ſtriking mark of the ſpecies, we prefer Mr. Dickſon's name *axillare*, as more expreſſive as well as older than Hedwig's; though we are well aware of the truth of that great phyſiologiſt's obſervation, that the fructification in this, as in other *Phaſca*, is originally terminal. The leaves are numerous, alternate, rather ſpreading, awl-ſhaped, keeled, entire, beardleſs, of a tranſparent bright green. Fruit-ſtalk ſhorter than the leaves, moſtly ſolitary, rarely (as Hedwig alſo obſerves) two together, recurved. Capſule elliptical, pointed, brown when ripe.



June 1. 1802. Published by Jas. Sowerby London.

HYPNUM ſerpens.

Creeping White-veiled Hypnum.

CRYPTOGAMIA Muſci.

GEN. CHAR. *Fringe* double: *outer* of 16 tapering teeth: *inner* a toothed membrane. *Flowers* lateral. *Fruit-ſtalk* from a ſcaly ſheath.

SPEC. CHAR. Stem creeping. Branches irregularly ſubdivided, very ſlender. Leaves ſtraight, ovate, pointed, imbricated. Capſules oblong, curved.

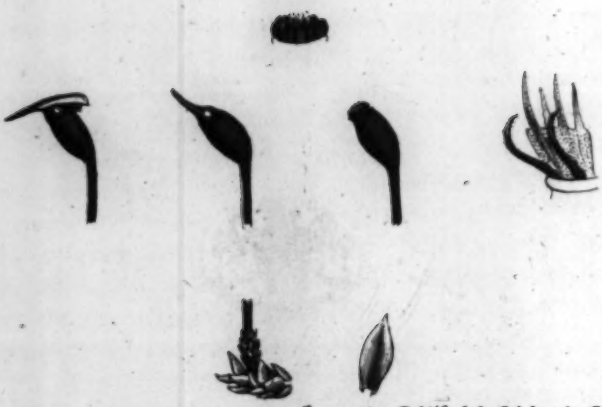
SYN. Hypnum ſerpens. *Linn. Sp. Pl.* 1596. *Hudſ.* 507. *With.* 865. *Hull.* 274. *Relh.* 416. *Sibth.* 302. *Abbot.* 251. *Hedw. Crypt. v.* 4. 45. *t.* 18. *Sp. Muſc.* 268.

H. trichodes ſerpens, ſetis et capſulis longis erectis. *Dill. Muſc.* 329. *t.* 42. *f.* 64.

A VERY general Moſs in moiſt ſhady places, running over decayed wood, trunks of trees, ſtones and earth, producing flowers and fruit at almoſt all ſeaſons when there is humidity in the air ſufficient to favour its growth.

Stems cloſely creeping, by means of numerous, ſhort, fibrous, perennial roots, and thickly branched. Branches irregular, ſimple or ſubdivided, very ſlender; clothed with ſmall, pale-green, upright, ovate, entire, ſharp-pointed, concave leaves, deſtitute of keel or nerve, and imbricated every way. The fruit-ſtalks ſpring from the ſide of the main ſtem, and the ſwelled baſe of each is enveloped with a few lanceolate pointed pellucid ſcales, conſtituting the *pericbætium* of Linnæus. The ſtalks are of a brilliant red in their lower part, pale above. Capſule inclined or curved, cylindrical, contracted under the rim. Lid ſhort, conical, with a little bluntiſh point. Veil white, tipped with light brown, very conſpicuous, and at firſt ſight diſtinguiſhing this ſpecies from *H. prælongum*, whoſe capſules indeed are much ſhorter.

The reaſons given p. 1021 on the ſubject of the inner fringe induce us to form the generic character of *Hypnum* ſo as to include the *Leſkia* of Hedwig, there being moreover no natural difference of habit to keep them diſtinct.



June 1. 1802. Published by Jas. Sowerby, London.

HYPNUM confertum.

Cluſtered Hypnum.

CRYPTOGAMIA Muſci.

GEN. CHAR. *Fringe* double: *outer* of 16 tapering teeth: *inner* a toothed membrane. *Flowers* lateral. *Fruit-ſtalk* from a ſcaly ſheath.

SPEC. CHAR. Stem creeping. Branches erect, cylindrical, ſimple. Leaves cloſely imbricated, ovate, acute, minutely ſerrated, obſoletely ribbed. Capſules inclining, ovate. Lid with a long ſlender curved beak.

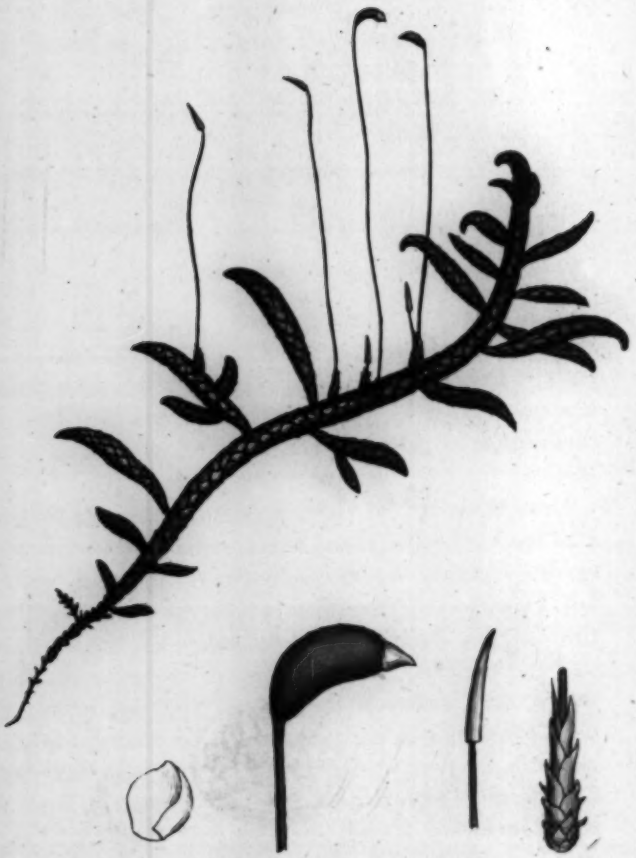
SYN. Hypnum confertum. *Dickſ. Crypt. faſc.* 4. 17. *t.* 11. *f.* 14.

H. clavellatum. *Hudſ.* 508. *With.* 866. *Hull.* 274.

WE have Mr. Dickſon's authority for believing this the *Hypnum clavellatum* of Hudſon; that of Linnæus, adopted entirely from Dillenius, is a Pennſylvanian moſs, unknown in Europe, though Linnæus incautiouſly ſays the contrary. The *clavellatum* of Pollich and Hedwig ſeems to be ſtill a different ſpecies.

Ours therefore has received the name of *confertum* in Mr. Dickſon's 4th *faſciculus*. It is a rare ſpecies, and was gathered at Walthamſtow by Mr. Dillwyn, bearing ripe fruit early in laſt February. The ſtems creep upon the bark of trees, throwing up ſhort ſimple round branches, thickly clothed (as well as the ſtems) with concave, ovate, more or leſs pointed, leaves, very obſcurely ſerrated in their upper part, and furniſhed with one central rib, which vaniſhes about the middle of the leaf. Fruit-ſtalks from a lateral or axillary ſcaly bulb, ſcarcely more than half an inch long, reddiſh-brown. Capſules ovate, inclining, turgid. Veil whitiſh. Lid with a long ſlender curved beak.

By Hedwig's figure of *H. murale* this ſhould be ſcarcely diſtinguiſhable from that ſpecies; but we find the leaves of the latter more long and pointed than he draws them, and very diſtinctly ſerrated throughout their whole length. Future more minute examinations may perhaps help us to further diſtinctions.



Jan.ry 1st 1812 Published by J.t Sowerby London.

HYPNUM ſcorpioides.

Scorpion Hypnum.

CRYPTOGAMIA Muſci.

GEN. CHAR. *Fringe* double: *outer* of 16 tapering teeth: *inner* a toothed membrane. *Flowers* lateral. *Fruit-ſtalk* from a ſcaly ſheath.

SPEC. CHAR. Stem procumbent. Branches ſcattered, ſwelling upwards. Leaves ovate, acute, concave, curved all one way, without a midrib. Capſules drooping. Lid conical.

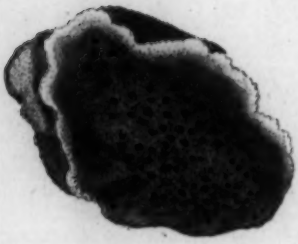
SYN. Hypnum ſcorpioides. *Linn. Sp. Pl.* 1592. *Hudſ.* 501. *With.* 856. *Hull.* 271. *Relh.* 412. *Abbot.* 249. *Dickſ. H. Sicc. faſc.* 3. 22. *Hedw. Sp. Muſc.* 295.

H. ſcorpioides paluſtre magnum, Lycopodii inſtar ſparſum. *Dill. Muſc.* 290. *t.* 37. *f.* 25.

COMMUNICATED from Cambridgeſhire by the Rev. Mr. Hemſted. It grows on turfy bogs, and is ſaid to be more frequent in the mountainous or northern counties than with us. Mr. Pitchford and the Rev. Mr. Bryant found it long ago on Felthorpe bogs 5 or 6 miles north of Norwich, where many other ſcarce plants have been diſcovered.

The ſtem is procumbent, leafy, bearing many ſhort, irregularly ſcattered, branches, likewiſe leafy, which are taper at their baſe, thicker upward, ending in a hooked leafy point, and generally not ſubdivided. The leaves are ovate, concave, acute, entire, membranous and ſhining, without a rib, cloſely imbricated, their tips all pointing towards one ſide, which is moſt remarkable in the younger part of the branches. Each fruit-ſtalk ſprings from a lateral, axillary, very ſcaly ſheath, and is erect, taper, and red. Capſule incurved; when ripe, yellow on the under ſide, brown above. Lid conical, ſharp. Veil tipped with brown. Fringe yellow.

When the leaves grow long immerſed in water, they become of a dark rich brown, the young ones only remaining of a yellowiſh or tawny green.



July 1. 1802 Published by Ja.s Sowerby London.

LICHEN cæſio-rufus.

Grey and red Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, ſcattered warts.

Female, ſmooth ſhields or tubercles, in which the ſeeds are imbedded.

SPEC. CHAR. Cruſt granulated, lobed, pale grey. Shields tawny red, flattiſh, with a thick, white, undulated border.

SYN. Lichen cæſio-rufus. *Schrad. Spicil.* 80.

L. craſpedius. *Achar. Prodr.* 45.

L. arenarius. *Dickſ. Crypt. faſc.* 4. 23. *t.* 12. *f.* 2.

Verrucaria cæſio-rufa. *Hoffm. Fl. Germ. v.* 2. 178.

THE firſt ſpecimen of this Lichen ever noticed in England I gathered in 1783, on a wall at Strumpſhaw, the moſt elevated ſpot in Norfolk. It has ſince been found at Wiſbeach by Mr. W. Skrimſhire, and ſent to Mr. Sowerby. It grows on bricks, ſand-ſtone, or lime-ſtone, in roundiſh patches of a whitiſh grey, granulated, rather thin cruſt, whoſe edge is paler, ſmoother, dilated, crenate, and ſomewhat lobed. The ſhields are irregularly ſcattered, ſmall, ſeſſile, flattiſh; their diſk of a deep orange or tawny red, occaſionally more or leſs vivid, by age becoming almoſt brown; their border is conſpicuous, white, crenate and waved. Within the proper border the thickened edge of the diſk, ſomewhat paler than the central part, is remarkable, ſeeming, in young ſhields, to ſtain the white part with orange.

We are aſſured of the correctneſs of the above ſynonyms from the beſt authority, and it appears therefore that Dr. Acharius miſquotes *L. cæſio-rufus* of Schrader as a ſynonym to his own, which we know from his ſpecimens to be the *ferrugineus* of Hudſon. We retain for our plant the moſt original, expreſſive, and certain name. We ſhould not heſitate to quote *Patellaria arenaria* of Hoffmann as the ſame, were it not expreſsly mentioned in his *Fl. Germ.* as diſtinct.

July 1. 1802. Published by Jas. Sowerby, London.

FUCUS ſanguineus.

Red dock-leaved Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

SPEC. CHAR. Stem round, branching. Leaves ſimple, elliptical, blunt, waved, entire, with numerous parallel tranſverſe veins.

SYN. Fucus ſanguineus. *Linn. Mant.* 136. *Gooden. and Woodw. in Linn. Tranſ. v.* 3. 109. *Hudſ.* 573. *With. v.* 4. 94. *Hull.* 316. *Lightf.* 942. *Gmel. Fuci* 185. *t.* 24. *f.* 2.

F. ſive Alga folio membranaceo purpureo, Lapathi ſanguinei figurâ et magnitudine. *Raii Syn.* 47.

NOT very rare on ſubmarine rocks and ſtones; nor is it unfrequently caſt up on the ſea beach in various parts of England and Scotland. Lightfoot mentions never having ſeen the fruit; but we have found it on the Leith ſhore, and Mr. Dillwyn has favoured us with fine ſpecimens, laden with fructification, from Dover.

The brilliant roſe-colour of this Fucus, and its delicately waved and veined leaves, render it a beautiful and generally attractive object. The ſhort branched ſtem is fixed by a ſwelling to the rocks; the leaves vary in length from 3 to 12 inches; their form is elliptical, obtuſe; their ſubſtance membranous, elegantly waved and plaited; their margin entire. A ſtrong rib continued from the ſtem runs through the leaf, producing at right angles many ſtraight, parallel, lateral ribs or veins. The capſules grow on ſhort ſtalks from the midrib of an old leaf, and are globular, pointed, containing a round maſs of dark-coloured ſeeds.—Ray's compariſon of the leaves to thoſe of *Rumex ſanguineus* is not unapt, however different the colour may be.

July 1 1802 Published by Jas Sowerby, London

FUCUS pinaſtroides.

Pine Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

SPEC. CHAR. Frond thread-ſhaped, much branched: ultimate branches cloſely imbricated, in pairs, awl-ſhaped, rather inclining to one ſide, curved, entire.

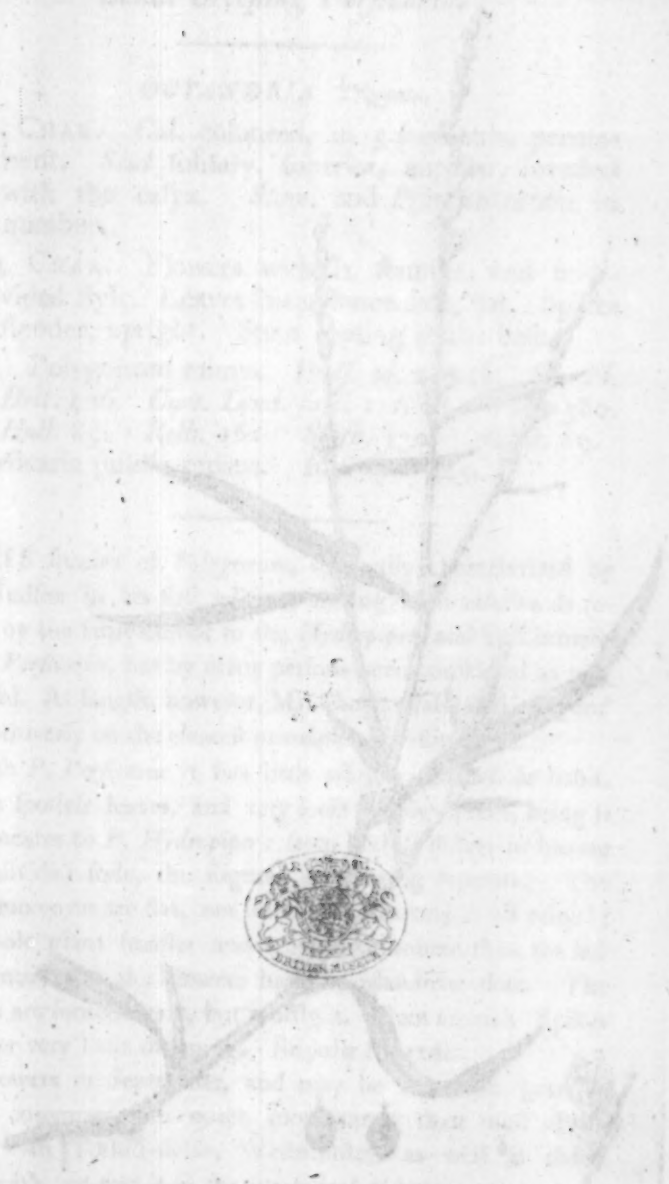
SYN. Fucus pinaſtroides. *Gmel. Fuci* 127. *t.* 11. *f.* 1. *Gooden. and Woodw. in Linn. Tranſ. v.* 3. 222. *Hull.* 327.

F. incurvus. *Hudſ.* 590. *With. v.* 4. 115.

Pinus maritima, ſive Fucus teres, cujus ramuli ſetis ſurſùm tendentibus ſunt obſiti. *Raii Syn.* 50.

FREQUENT, either growing on rocks, or caſt up on the ſand, on moſt parts of the ſea ſhore, bearing its fruit in December.

The ſtem is round, tough, much branched, adhering by a fibrous baſe. Branches round, ſubdivided, the ultimate ſubdiviſions in pairs, (as Mr. Turner has firſt remarked,) awl-ſhaped, curved upwards, denſe and very numerous. Capſules the ſize of rape ſeed, axillary or lateral, ſeſſile or on ſhort ſimple ſtalks, globular. The colour of the whole plant is a dark dull reddiſh brown, black when dry. The younger branches, when cloſely examined, are found obſcurely jointed like a *Conferva*; hence the late Mr. Lightfoot was inclined to remove the plant to that genus. But the joints diſappear in the ſtem and old branches, and the fruit agrees with that of true *Fuci*.



July 1. 1802. Published by Jas. Sowerby, London.

POLYGONUM minus.

Small Creeping Perſicaria.

OCTANDRIA Trigynia.

GEN. CHAR. *Cal.* coloured, in 5 ſegments, permanent. *Seed* ſolitary, ſuperior, angular, inveſted with the calyx. *Stam.* and *Piſt.* uncertain in number.

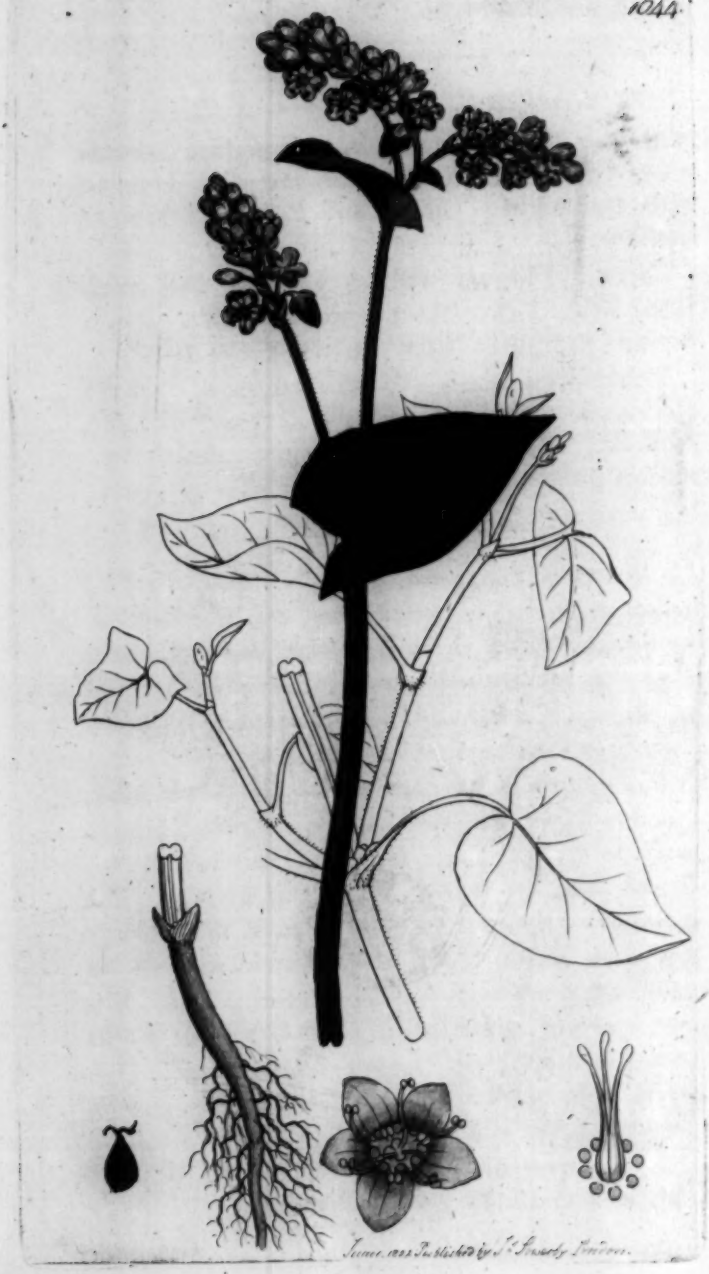
SPEC. CHAR. Flowers with ſix ſtamina, and undivided ſtyle. Leaves linear-lanceolate, flat. Spikes ſlender, upright. Stem rooting at the baſe.

SYN. Polygonum minus. *Hudſ. ed.* 1. 148. *Sm. Fl. Brit.* 426. *Curt. Lond. faſc.* 1. *t.* 28. *With.* 380. *Hull.* 85. *Relh.* 161. *Sibth.* 130. *Abbot.* 89. Perſicaria puſilla repens. *Raii Syn.* 145.

THIS ſpecies of *Polygonum*, originally characterized by Mr. Hudſon in his firſt edition, having been afterwards reduced by the ſame author to the *Hydropiper*, and by Linnæus to the *Perſicaria*, has by many perſons been conſidered as very doubtful. At length, however, Mr. Curtis eſtabliſhed it beyond all controverſy on the cleareſt principles of diſtinction.

With *P. Perſicaria* it has little affinity; its whole habit, ſmooth ſpotleſs leaves, and very looſe ſlender ſpikes, bring it much nearer to *P. Hydropiper:* from both it differs in having an undivided ſtyle, the ſtigmas only being ſeparate. The leaves moreover are flat, not undulated, ſcarcely at all veined; the whole plant ſmaller and more procumbent than the laſt mentioned, and the flowers have no glandular dots. The ſtigmas are ſometimes 3, but moſtly 2. Root annual. Spikes erect, or very little drooping. Stipulæ fringed.

It flowers in September, and may be found on gravelly watery commons, but much more rarely than moſt of its genus. In Tothill-fields, Weſtminſter, as well as about Blackheath, we find it in the greateſt abundance.



June 1st 1822 Published by J.S. Sowerby London.

POLYGONUM Fagopyrum.

Buck-wheat.

OCTANDRIA Trigynia.

GEN. CHAR. *Cal.* coloured, in 5 ſegments, permanent. *Seed* ſolitary, ſuperior, angular, inveſted with the calyx. *Stam.* and *Piſt.* uncertain in number.

SPEC. CHAR. Leaves heart-arrowſhaped. Stem nearly upright, without prickles. Angles of the ſeeds even.

SYN. Polygonum Fagopyrum. *Linn. Sp. Pl.* 522. *Sm. Fl. Brit.* 430. *Hudſ.* 172. *With.* 384. *Hull.* 86. *Sibth.* 130. *Abbot.* 90. *Mart. Ruſt. t.* 46. Fegopyrum. *Raii Syn.* 144.

BUCK-WHEAT, or Brank, is univerſally allowed to be of exotic origin, though now naturalized on dunghills, or about cultivated land, in England and other parts of Europe. It moſt probably came from Aſia, where there are many other ſpecies of *Polygonum* more nearly akin to this than the generality of our own. It is annual, flowering in July and Auguſt. The ſeeds afford a meal, neither unwholeſome nor unpalatable, and are excellent food for poultry. In Norfolk it is much cultivated for the ſake of pheaſants.

The root is fibrous. Herb ſucculent. Stem a foot high or more, upright, branched, rather crooked or zigzag, round, leafy, ſmooth, except a downy line more or leſs conſpicuous along one ſide. Leaves between heart- and arrow-ſhaped, acute, entire, ſmooth; the uppermoſt ſeſſile. Stipulæ ſmall and beardleſs. Flowers in panicled cluſters, variegated with red and white, not inelegant. Five of the eight ſtamina bear antheræ whoſe lobes are ſeparated by a ſhort bar. All the filaments have yellow glands between them. The 3 ſtyles are divided to the very baſe. The 3 angles of the ſeed are ſtraight and even, neither lobed nor undulated as in ſome foreign ſpecies.

Sowerby del. Published by J. Sowerby, London.

BARTSIA viſcoſa.

Yellow Viſcid Bartſia.

DIDYNAMIA Angioſpermia.

GEN. CHAR. *Cal.* in 4 lobes, moſtly coloured. *Cor.* ringent, with a contracted orifice: *upper lip* concave, longeſt; *lower* in 3 equal reflexed lobes. *Capſ.* ovate, compreſſed, with 2 cells, and many angular *ſeeds*.

SPEC. CHAR. Leaves ſerrated: the upper ones alternate. Flowers lateral and diſtant. Antheræ hairy.

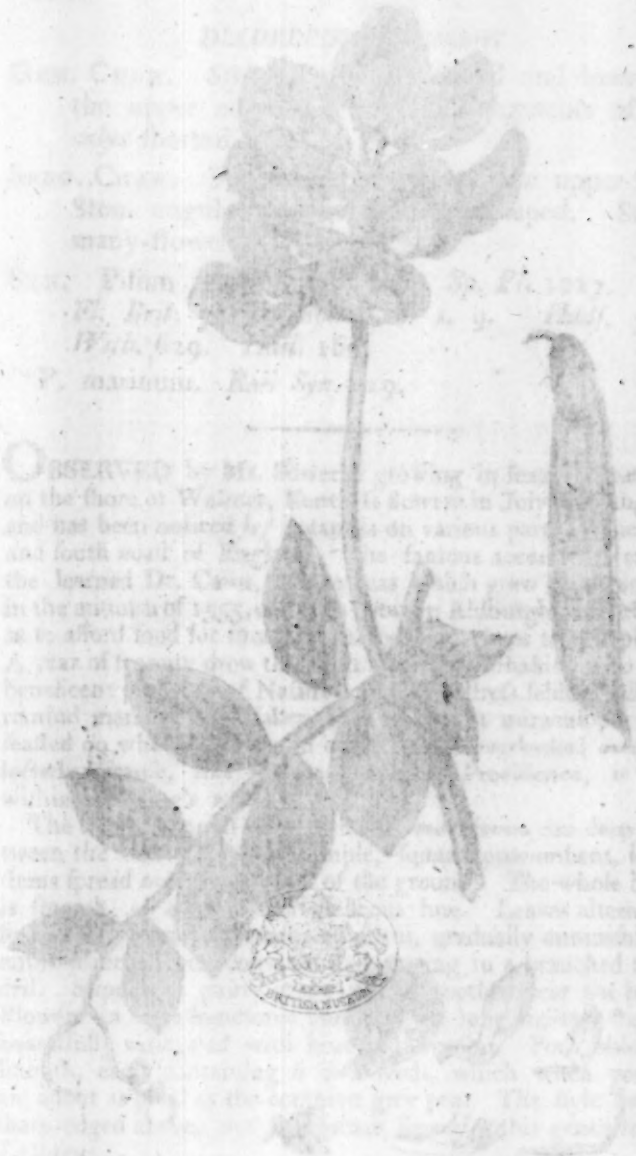
SYN. Bartſia viſcoſa. *Linn. Sp. Pl.* 839. *Sm. Fl. Brit.* 648. *Hudſ.* 267. *With.* 541. *Hull.* 136. *Lightf.* 321. *t.* 14. *Dickſ. Dr. Pl.* 72.

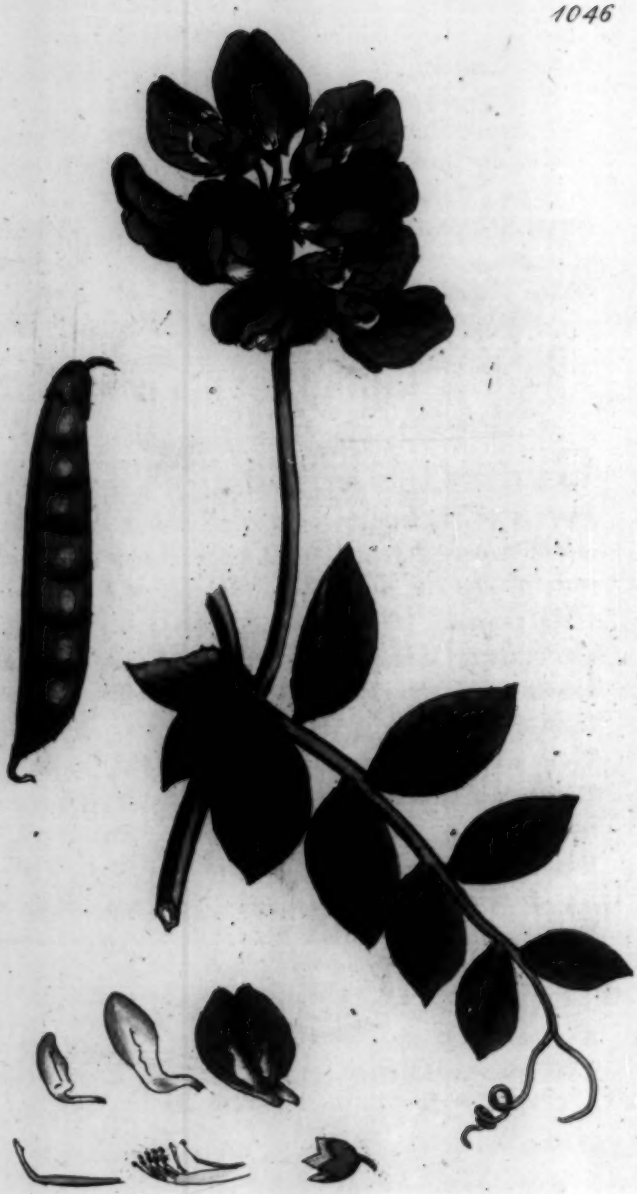
Euphraſia major lutea latifolia paluſtris. *Raii Syn.* * 285.

GATHERED by S. Hailſtone, eſq. near Blackpool and Scareſbrick, Lancaſhire, flowering in July and Auguſt. It is one of our rareſt plants, having been found chiefly in marſhy parts of Devonſhire and Cornwall, and in Argylſhire.

Root annual. Herb downy and viſcid, drying black. Stem almoſt always ſimple, erect, various in height, round, leafy. Leaves ſeſſile, oblong or ſomewhat ovate, ribbed, rough, deeply toothed or ſerrated; the lowermoſt oppoſite; the reſt alternate. Flowers axillary, ſolitary, nearly ſeſſile. Calyx tubular, ribbed, regular, pale or whitiſh at the baſe. Corolla yellow; its upper lip undivided; lobes of the lower obtuſe, nearly equal, ſtriped at their baſe. Antheræ hairy, with 2 ſharp lobes. Capſule ovate, ribbed, purpliſh, hairy, eſpecially upwards. Seeds very numerous, minute, ſomewhat angular, by no means either compreſſed or winged.

Great difficulties attend the generic diſcrimination of *Bartſia*, *Rhinanthus*, *Melampyrum* and *Euphraſia*. We are not ſure that *Rhinanthus Trixago* of Linnæus is not the very ſame thing with his and our *Bartſia viſcoſa*; but we are certain our plant cannot be a *Rhinanthus* on account of the ſeeds, which, with the antheræ, afford the beſt marks for diſtinguiſhing theſe genera.





July 1. 1802. Published by Jas Sowerby, London.

PISUM maritimum.

Sea Pea.

DIADELPHIA Decandria.

GEN. CHAR. *Style* triangular, keeled and downy at the upper edge. Two upper ſegments of the *calyx* ſhorteſt.

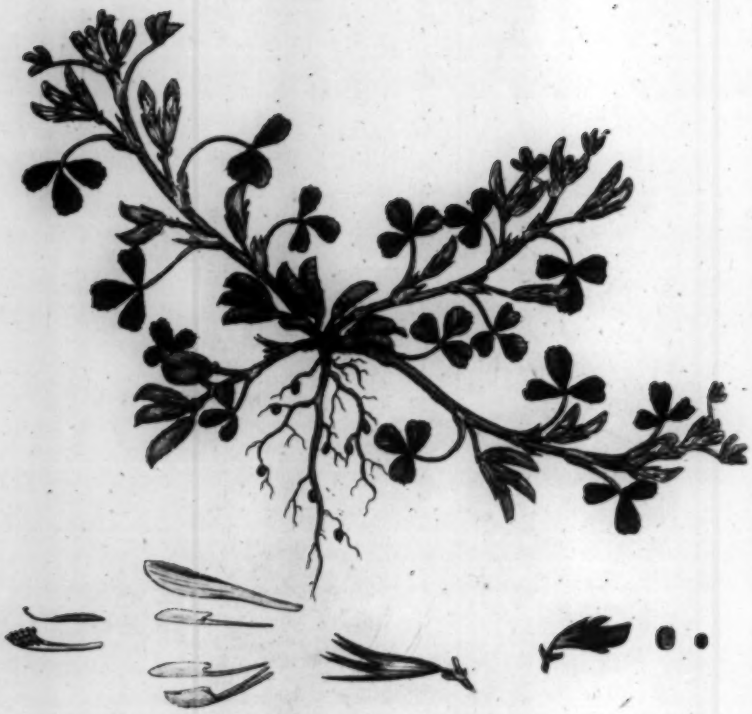
SPEC. CHAR. Footſtalks flattiſh on the upper ſide. Stem angular. Stipulæ arrow-ſhaped. Stalks many-flowered.

SYN. Piſum maritimum. *Linn. Sp. Pl.* 1027. *Sm. Fl. Brit.* 760. *Spicil.* 8. *t.* 9. *Hudſ.* 313. *With.* 629. *Hull.* 160.

P. marinum. *Raii Syn.* 319.

OBSERVED by Mr. Sowerby growing in ſcattered patches on the ſhore at Walmer, Kent. It flowers in July and Auguſt, and has been noticed by botaniſts on various parts of the eaſt and ſouth coaſt of England. The famous account given by the learned Dr. Caius, of the peas which grew ſo copiouſly in the autumn of 1555, on rocks between Aldburgh and Orford, as to afford food for thouſands of people, relates to this plant. A year of ſcarcity drew the attention of the inhabitants to this beneficent proviſion of Nature; and, as diſtreſs ſeldom fails to remind man of his Maker, they deemed it miraculous, and feaſted on what they have in other ſeaſons overlooked or neglected, becauſe, like the beſt gifts of Providence, it was within every one's reach.

The long perennial roots of the *P. maritimum* run deep between the ſtones, and the ſimple, ſquare, procumbent, leafy ſtems ſpread over the ſurface of the ground. The whole herb is ſmooth, of a greyiſh or glaucous hue. Leaves alternate, formed of ſeveral, alternate, elliptical, gradually diminiſhing, entire leaflets, their common ſtalk ending in a branched tendril. Stipulæ in pairs, arrow-ſhaped, toothed near the baſe. Flowers in large handſome bunches, on long axillary ſtalks, beautifully variegated with blue and crimſon. Pods oblong, ſmooth, each containing 6 or 8 ſeeds, which when young are about as good as the common grey pea. The ſtyle being ſharp-edged above, not flat, alone ſeparates this genus from *Lathyrus*.



July 1.1812 Published by J.t Sowerby Londen.

TRIFOLIUM ornithopodioides.
Bird's-foot Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or leſs capitate. *Pod* ſcarcely longer than the calyx, never burſting, but falling off entire.

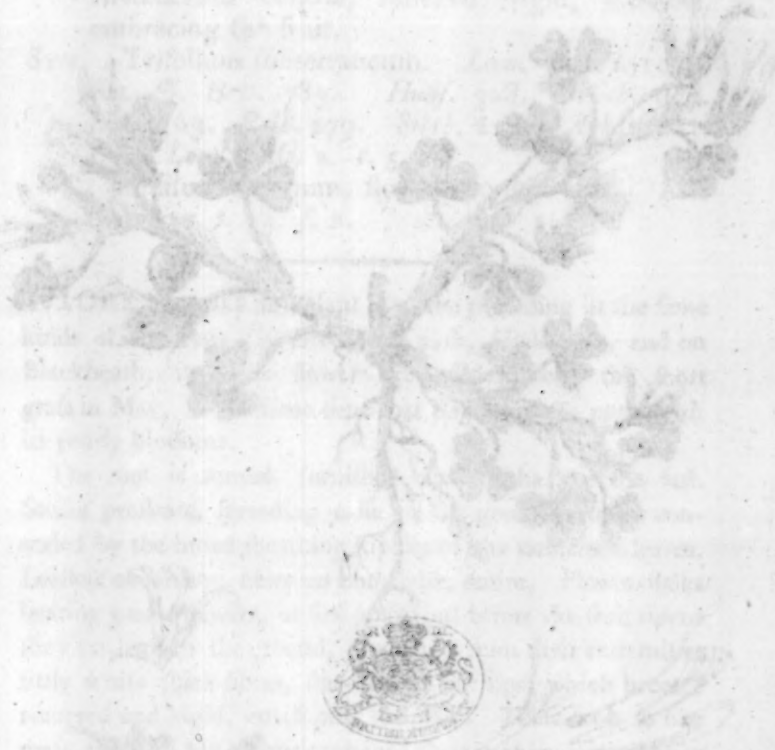
SPEC. CHAR. Pods naked, eight-ſeeded, about three together, twice as long as the calyx. Stems procumbent.

SYN. Trifolium ornithopodioides. *Linn. Sp. Pl.* 1078. *Sm. Fl. Brit.* 782. *Hudſ.* 324. *With.* 645. *Hull.* 162. *Curt. Lond. faſc.* 2. *t.* 53.

Fœnugræcum humile repens, Ornithopodii filiquis brevibus erectis. *Raii Syn.* 331. *t.* 14. *f.* 1.

PROBABLY, as Mr. Curtis obſerves, the ſmall ſize, and, we may add, the proſtrate poſition, of this Trefoil, may have cauſed it to be thought more rare than it really is. It grows on barren gravelly heaths among ſhort graſs, flowering in June and July, and is annual. Our ſpecimen came from Blackheath.

The fibrous root is furniſhed with ſmall fleſhy knobs, as in *Vicia lathyroides* and ſome others of this claſs, apparently to reſiſt accidental drought during ſummer. The ſtems ſpread cloſe to the ground, and are ſmooth, leafy, moſtly unbranched. Leaves on long ſtalks, with lanceolate, pointed, united ſtipulæ; their leaflets obcordate, ribbed, more or leſs ſerrated, ſmooth. Flower-ſtalks axillary, ſhort, bearing 2 or 3 ſlender reddiſh flowers in an umbel. Calyx-teeth long and taper. Petals with long claws. Pod oblong, blunt, tranſverſely rugged, almoſt twice as long as the calyx, and containing about 8 ſeeds; circumſtances which, while they prevent our confounding this with any other Britiſh *Trifolium*, render it very difficult to conſtruct a generic character which may comprehend all the ſpecies which Nature has ſtamped with the habit and general ſtructure of the genus.



July 1. 1802 Published by Jas Sowerby, London.

TRIFOLIUM ſubterraneum.

Subterraneous Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or leſs capitate. *Pod* ſcarcely longer than the calyx, never burſting, but falling off entire.

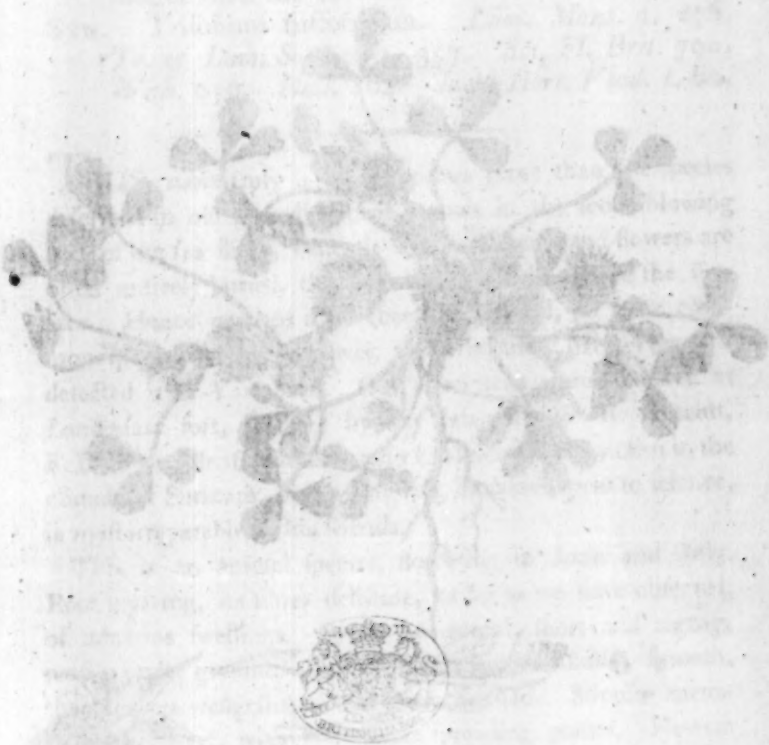
SPEC. CHAR. Heads hairy, of about four flowers. Involucrum central, reflexed, rigid, ſtar-like, embracing the fruit.

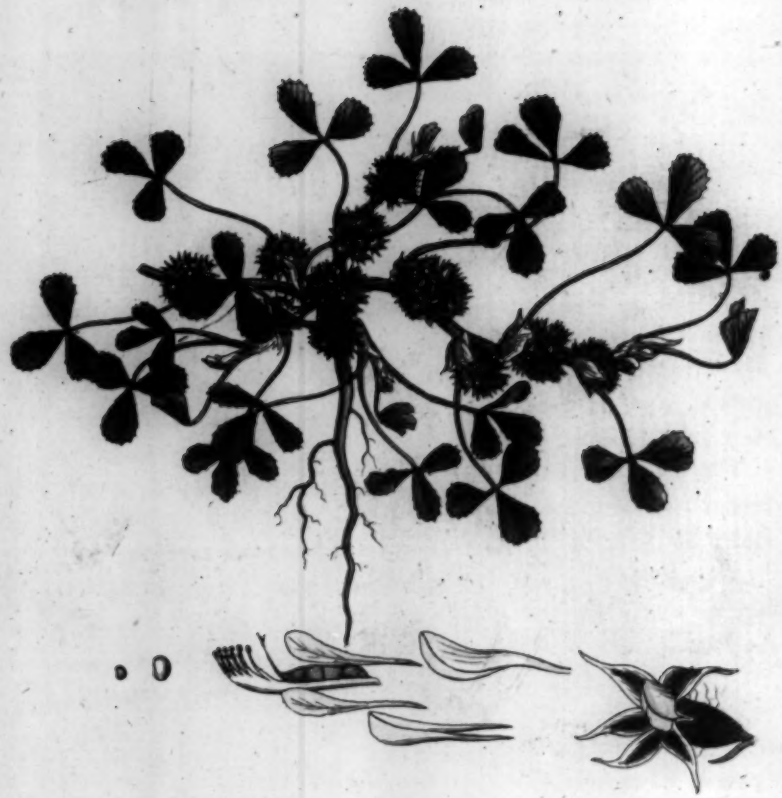
SYN. Trifolium ſubterraneum. *Linn. Sp. Pl.* 1080. *Sm. Fl. Brit.* 783. *Hudſ.* 328. *With.* 647. *Hull.* 163. *Relh.* 279. *Sibth.* 228. *Abbot.* 161. *Curt. Lond. faſc.* 2. *t.* 54.

T. pumilum ſupinum, floſculis longis albis. *Raii Syn.* 327. *t.* 13. *f.* 2.

MORE generally abundant than the preceding in the ſame kinds of ſituations; in Greenwich park, Hyde park, and on Blackheath, its white flowers are viſible among the ſhort graſs in May, at the ſame time that *Sagina erecta* puts forth its pearly bloſſoms.

The root is annual, furniſhed with knobs like the laſt. Stems proſtrate, ſpreading cloſe to the ground, almoſt concealed by the broad ſheathing ſtipulæ of the numerous leaves. Leaflets obcordate, hairy on both ſides, entire. Flower-ſtalks bearing 3 or 4 flowers, at firſt erect, but before the fruit ripens they are bent to the ground, producing from their extremities little white thick fibres, ſtar-like at their tips, which become recurved and rigid, enveloping the fruit. Theſe look ſo like roots, that, till Mr. Curtis explained their economy, every body miſtook them for ſuch, and Dillenius (aware that the plant, being an annual, did not propagate itſelf by theſe ſuppoſed roots) conjectured they might draw moiſture to nouriſh the ſeed. The long ſlender milk-white petals render this ſpecies conſpicuous, though, when firſt ſeen, they are ſeldom taken for the flowers of a Trefoil. The calyx-teeth are long and hairy. Pod thin, containing one dark-brown ſeed.





July 1, 1807. Published by J. Sowerby, London.

TRIFOLIUM ſuffocatum.

Suffocated Trefoil.

DIADELPHIA Decandria.

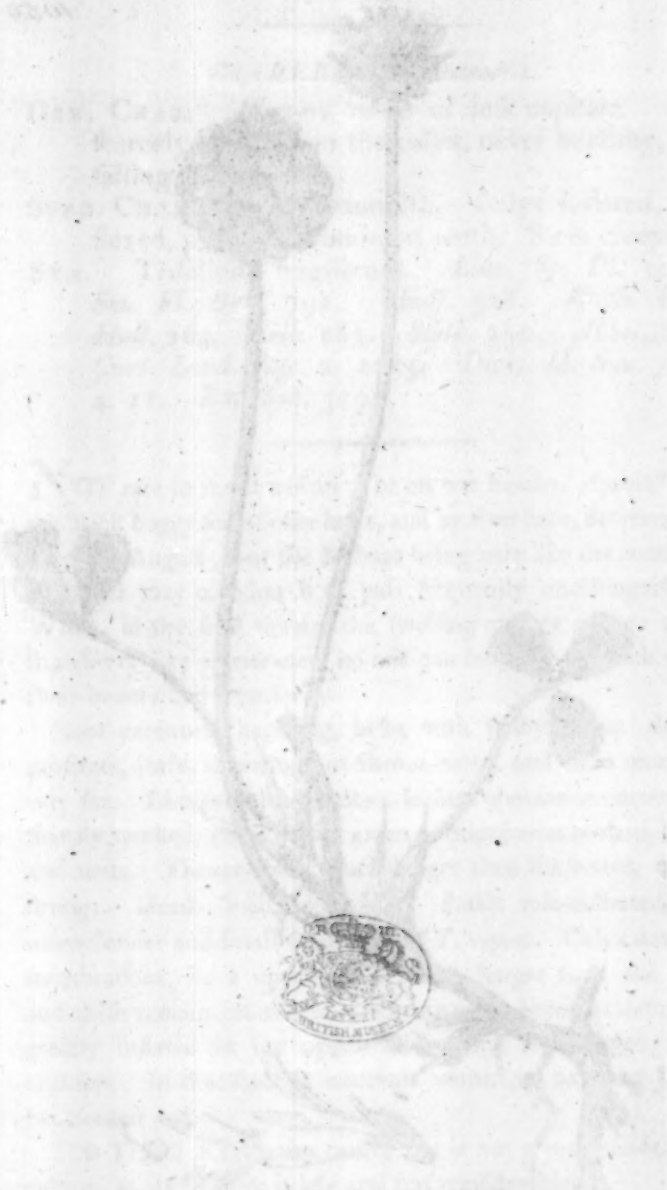
GEN. CHAR. *Flowers* more or leſs capitate. *Pod* ſcarcely longer than the calyx, never burſting, but falling off entire.

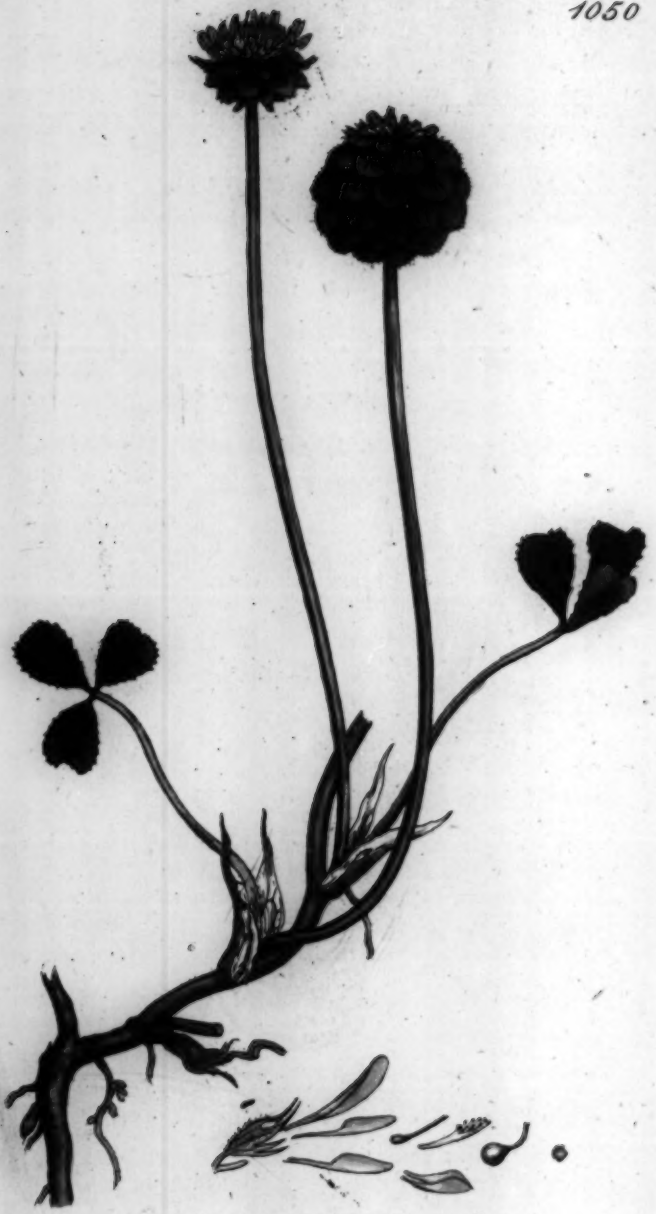
SPEC. CHAR. Heads ſeſſile, lateral, roundiſh, nearly ſmooth. Calyx-teeth lanceolate, acute, recurved, longer than the corolla.

SYN. Trifolium ſuffocatum. *Linn. Mant.* 2. 276. *Tr. of Linn. Soc. v.* 2. 357. *Sm. Fl. Brit.* 790. *With.* 656. *Hull.* 164. *Jacq. Hort. Vind. t.* 60.

THIS, more truly a ſubterraneous plant than the ſpecies deſcribed in our preceding page, grows in the looſe blowing ſand of the ſea ſhore, beneath which its ſtems and flowers are often entirely buried, the leaves only peeping above the ſurface. Hence perhaps it has been overlooked, as ſome common ſpecies not yet in flower. The accurate Mr. Wigg firſt detected it at Yarmouth. Our ſpecimens were gathered at Landguard fort, Suffolk, by the late Mr. W. R. Notcutt, F. L. S. an ardent naturaliſt, who has ſince fallen a victim to the climate of Surinam, and whoſe loſs, however great to ſcience, is moſt irreparable to his friends.

This is an annual ſpecies, flowering in June and July. Root tapering, its fibres deſtitute, as far as we have obſerved, of tuberous ſwellings. Stems horizontal, ſhort and zigzag, moſtly under ground. Leaves on very long footſtalks, ſmooth, their leaflets wedgeſhaped and finely toothed. Stipulæ membranous, broad, with remarkably ſpreading points. Flowers in ſeſſile axillary round heads. Body of the calyx a little hairy: teeth bent back, broad, acute, ſcarcely enlarged after the flowering. Corolla much ſhorter than the calyx-teeth, cloſed ſo as to protect the organs of fructification, which therefore perform their functions though buried in ſand. The excluſion of light often renders the petals whitiſh; otherwiſe they are roſe-coloured. Pod oblong, containing two yellowiſh ſeeds.





July 1. 1802 Published by Jas Sowerby London

TRIFOLIUM fragiferum.
Strawberry-headed Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or leſs capitate. *Pod* ſcarcely longer than the calyx, never burſting, but falling off entire.

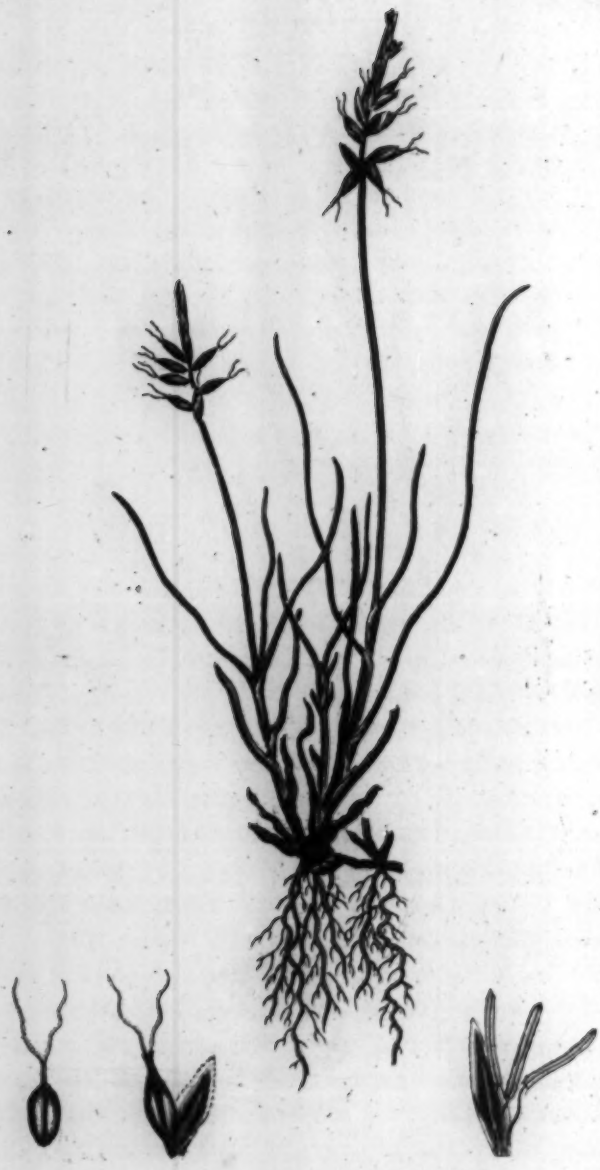
SPEC. CHAR. Heads roundiſh. Calyx inflated, reflexed, with two prominent teeth. Stem creeping.

SYN. Trifolium fragiferum. *Linn. Sp. Pl.* 1086. *Sm. Fl. Brit.* 791. *Hudſ.* 328. *With.* 654. *Hull.* 164. *Relh.* 283. *Sibth.* 230. *Abbot.* 163. *Curt. Lond. faſc.* 2. *t.* 55. *Dickſ. H. Sicc. faſc.* 4. 11. *Raii Syn.* 329.

NOT rare in moiſt paſtures, or on wet heaths, eſpecially in the black boggy ſoil of oſier holts, and by river ſides, flowering in July and Auguſt; but the herbage being very like the common *T. repens* may occaſion it to paſs frequently undiſtinguiſhed. When, as the fruit ripens, the ſwelling calyces aſſume their ſtrawberry-like appearance, no one can help being ſtruck with their beauty and ſingularity.

Root perennial, tapering, beſet with fleſhy knobs. Stems proſtrate, leafy, throwing out fibrous roots, and often creeping very far. Leaves on long ſtalks; leaflets obovate or obcordate, ſharply toothed, ribbed, dark green. Stipulæ lanceolate, large and acute. Flower-ſtalks much longer than the leaves, erect, ſtrong. Heads ſmall, roundiſh. Petals roſe-coloured, far more ſlender and ſmall than thoſe of *T. repens*. Calyx downy, membranous, its 2 upper teeth much longer than the reſt, and theſe remain prominent when the calyx becomes deflexed, greatly inflated in the upper ſide, veiny, and tinged with crimſon. In that ſtate it conceals within its baſe the ſmall two-ſeeded pod.

This Trefoil is eaten by cattle, but is not recommended for culture, as its produce is late and not conſiderable.



Aug.st 1. 1802. Published by Jas Sowerby, London.

CAREX pulicaris.

Flea Carex.

MONOECIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of 1 ſcale. *Cor.* none.—Female, *Catkin* imbricated. *Cal.* of 1 ſcale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a ſwelling tunic.

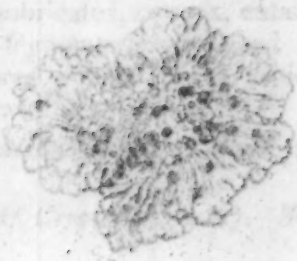
SPEC. CHAR. Spike ſimple, androgynous; the male flowers uppermoſt. Fruit ſpreading and reflexed, tapering at both ends. Stigmas two.

SYN. Carex pulicaris. *Linn. Sp. Pl.* 1380. *Gooden. Tr. of Linn. Soc. v.* 2. 142. *Sm. Fl. Brit.* 965. *Hudſ.* 402. *With.* 86. *Hull.* 204. *Relh.* 349. *Sibth.* 26. *Abbot.* 203.

Gramen cyperoides minimum, ſeminibus deorsùm reflexis puliciformibus. *Raii Syn.* 424.

THIS little Carex grows in ſpongy or muddy boggy places, flowering early in June, when it might be overlooked for the male plant of *C. dioica*, and in that ſtate it is figured in *Fl. Dan. t.* 166. When in a week or two the fruit begins to ripen, all the female flowers ſpread widely, and at length become reflexed, the dark brown highly poliſhed ſeed-caſes giving the plant a ſingular and characteriſtic aſpect, which has obtained it the name of the Flea Carex.

The root is fibrous, perennial. Stems ſimple, ſlender, ſmooth, from 3 to 10 inches high, ſheathed at the baſe with ſeveral ſlender, ſmooth, ſpreading leaves. Spike unbranched, ſlender, upright. Glumes lanceolate. Male flowers uppermoſt, numerous, with 3 ſhortiſh ſtamina; female rather fewer, with 2 ſtigmas, their glumes deciduous, being forced off by the bending back of the ripening germen. Fruit elliptic-lanceolate, tapering at each end, ſlightly cloven at the tip, ſharp-edged on each ſide, deſtitute of ribs or nerves, of a poliſhed brown. Seed elliptical, brown when ripe.



Aug.1.1803. Published by Jas Sowerby, London.

LICHEN cæſius.

Grey-warted Lichen.

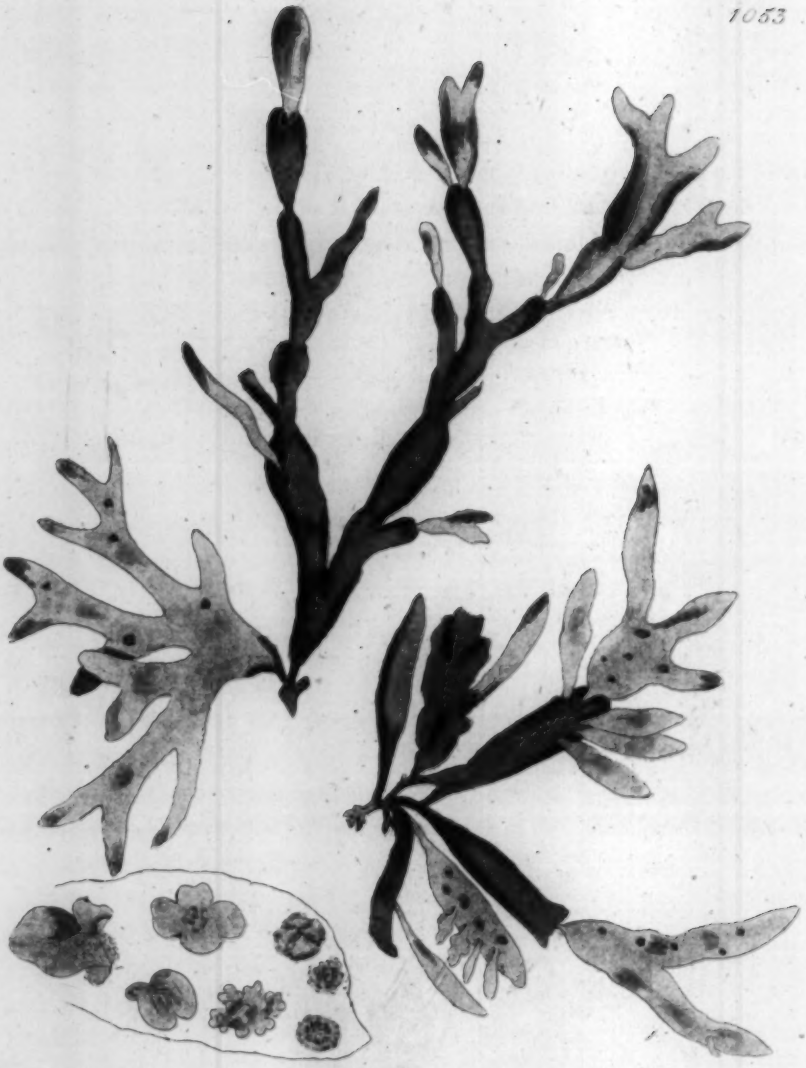
CRYPTOGAMIA Algæ.

GEN. CHAR. Male, ſcattered warts.
Female, ſmooth ſhields or tubercles, in which the ſeeds are imbedded.

SPEC. CHAR. Imbricated, convex, entangled, greyiſh white; its ſegments many-lobed and notched. Warts ſcattered, powdery, grey. Shields glaucous-black, with whitiſh margins.

SYN. Lichen cæſius. *Achar. Prod.* 107. *Schrad. Spicil.* 93.
L. Pſora. *Dickſ. Crypt. faſc.* 3. 17. *With. v.* 4. 26. *Hull.* 293.
Pſora cæſia. *Hoffm. Pl. Lich. t.* 8. *f.* 1.

OUR ſpecimens of this Lichen (which Mr. Dickſon firſt made known as an Engliſh ſpecies) were gathered by Mr. Turner on walls, graveſtones, &c., in the church-yards of Burgh and Bradwell, Suffolk, and Acle, Norfolk; and by Mr. Sowerby on the ſlaty roof of Richmond houſe, Richmond park. The narrow, convex, imbricated, and entangled fronds form a looſe uneven cruſt, ſoon loſing its original orbicular figure, beſprinkled with round convex powdery warts, of a rather whiter hue than the pale grey of the frond. The ultimate lobes are dilated, ſubdivided and notched, clothed with ſhort brown fibres beneath. The ſhields rarely occur with us, but are ſometimes very copious, ſmall, with an elevated crenate border of the colour of the frond: their diſk is flat, glaucous when dry, but if moiſtened or rubbed it becomes black.——The powdery warts, and the more brittle, narrow, and intricate ſtructure of the plant, diſtinguiſh this ſpecies with ſufficient certainty from *L. ſtellaris* and all the neighbouring kinds.



Aug.st 1 1802 Published by Jas. Sowerby, London.

FUCUS rubens.

Red proliferous Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

SPEC. CHAR. Frond rather membranous, forked; its branches proliferous, the ultimate ones dilated and cloven, with ſharpiſh points.

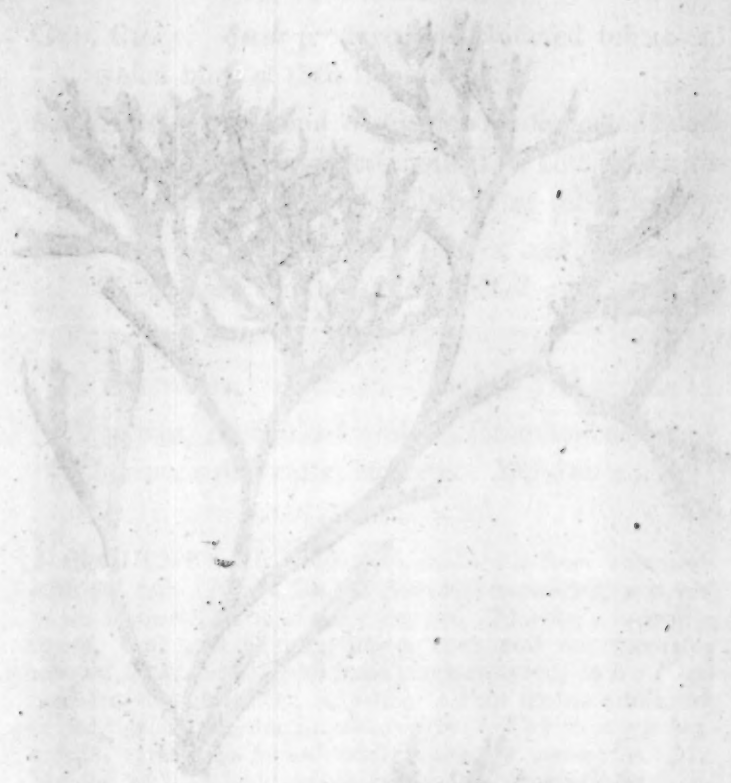
SYN. Fucus rubens. *Linn. Sp. Pl.* 1630. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 165. *Hull.* 321.
F. criſpus. *Hudſ.* 580.
F. prolifer. *Lightf.* 949. *t.* 30. *With. v.* 4. 105.
F. membranaceus purpureus, variè ramoſus. *Dill. in Raii Syn.* 47.

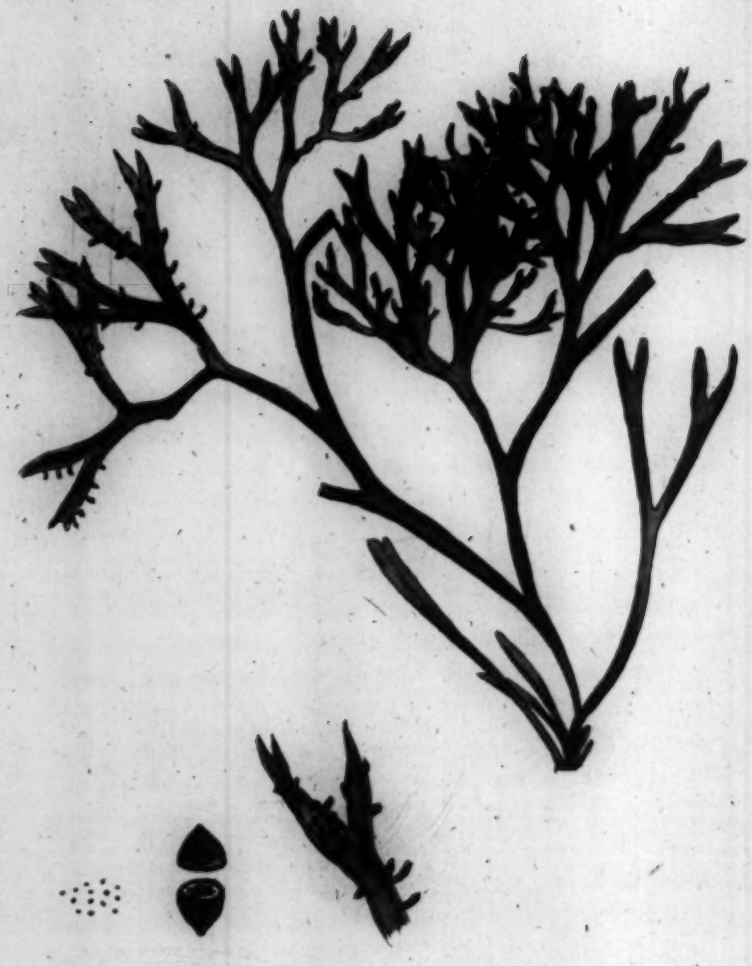
MR. D. TURNER favoured us with this ſpecimen from Yarmouth beach. The plant is not uncommon on the Britiſh coaſts, and has long been known by the name of *criſpus* in England, and of *prolifer* by thoſe more verſed in the *Flora Scotica*. The herbarium of Linnæus has at length proved it to be his *rubens*, a name we are therefore obliged to retain, though that of Lightfoot muſt be acknowledged the beſt, and his deſcription and figure deſerve no leſs commendation.

The frond is uniformly red, membranous or ſomewhat cartilaginous and tough, branched at the baſe, remarkably and repeatedly proliferous upward, the branches or joints ſpringing (as Lightfoot well obſerves) from the ſurface, not from the edge or point, of the preceding ones; the branches are rather elliptical than linear, entire at their edges; the ultimate ones forked or palmate, ending more or leſs acutely. Old fronds are mentioned in the Linnæan Tranſactions as having ſometimes a rib or nerve. Cluſters of apparent fructification are ſcattered over the frond, from which innumerable young plants ſprout forth, but whether from ſeeds or buds no one has yet clearly determined.

FUCUS rubens.

Rad proliferous Fucus.





Aug.1.1802. Published by Jas. Sowerby. London.

FUCUS mammilloſus.

Mammillary Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

SPEC. CHAR. Frond cartilaginous, forked, dilated upwards, ſharp-pointed, clothed on both ſides with numerous mammillary fruit-bearing tubercles.

SYN. Fucus mammilloſus. *Gooden. and Woodw. in Tr. of Linn. Soc. v. 3. 174. Hull. 323.*

F. canaliculatus β. *Hudſ.* 583.

F. ceranoides. *With.* 99. *Lightf.* 916, ε.

F. parvus, cauliculis teretibus, ſummitatibus membranaceis dilatatis et laceratis. *Raii Syn.* 44.

FREQUENT on the coaſt. We received it from Yarmouth with the laſt. No ſpecies has been leſs underſtood, and yet, as we conceive, none is more certain. Moriſon's expreſſive figure, *Sect.* 15. *t.* 8. *f.* 13, having been moſt unaccountably referred by Linnæus, with ſome commendation, to his *F. ceranoides*, though ſcarcely any other 2 Fuci are more different, cauſed this and the true Linnæan *criſpus* (of which it was ſuppoſed a variety) to be univerſally taken for *ceranoides*. Mr. Hudſon in his 2d edition has removed our *mammilloſus* to the *canaliculatus*, a ſpecies totally diſtinct from it in colour, habit, and moſt eſpecially in fructification, ſee our *v.* 12. *t.* 823. ——The *Fucus* before us can be confounded with no other, if attention be paid to the ſingular mammillary tubercles which cover both ſides of its uppermoſt ramifications, each of which contains a cluſter of dark-red ſeeds. In habit and colour, varying from red, or pale purple, to a pale greeniſh brown, it agrees with *criſpus*, but is more channelled, and generally ſharper pointed. It is ſometimes found much narrower than is here repreſented.

Published August 1st 1802. by Jas Sowerby, London.

CONFERVA coccinea.

Scarlet Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in round, ſolitary, cloſed tubercles, projecting from the frond, but united with it.

SPEC. CHAR. Jointed, branched, rough; branches alternate, doubly pinnate; the ultimate ones tufted, ſcarlet. Capſules ſolitary, ovate, red.

SYN. Conferva coccinea. *Hudſ.* 603. *With. v.* 4. 141. *Hull.* 335. *Dickſ. H. Sicc. faſc.* 15. 25.
C. plumoſa. *Lightf.* 996.

THIS moſt beautiful *Conferva* is frequently thrown up on the ſea ſhore. It was firſt well deſcribed by Mr. Ellis in the 57th volume of the Philoſophical Tranſactions, by the name of *plumoſa*. It is eaſily known by the roughneſs of its main ſtem, its general red colour, but more eſpecially the vivid ſcarlet of its youngeſt branches. Every part is jointed, more diſtinctly ſo than *C. byſſoides, v.* 8. *t.* 547, to which this ſpecies is nearly akin; and the ſame reaſons which induced us to make that a *Conferva*, muſt ſupport us in the preſent inſtance, for the fructification can hardly be diſtinguiſhed from that of a *Fucus*. Some have gone ſo far as to deſcribe the male flowers of *C. coccinea* on a ſeparate plant from the female; but we readily aſſent to Dr. Hull's ſuppoſition, that ſuch are, moſt probably, capſules in another ſtage of growth, the ſame varieties of appearance being obſervable in ſome *Fuci*.

Aug.1 1801. Published by Jas Sowerby London

CIRCÆA lutetiana.

Common Enchanter's Nightſhade.

DIANDRIA Monogynia.

GEN. CHAR. *Cor.* of 2 petals. *Cal.* of 2 leaves, ſuperior. *Capſ.* of 2 cells. *Seeds* ſolitary.

SPEC. CHAR. Stem erect. Leaves ovate, ſlightly toothed, opaque and downy.

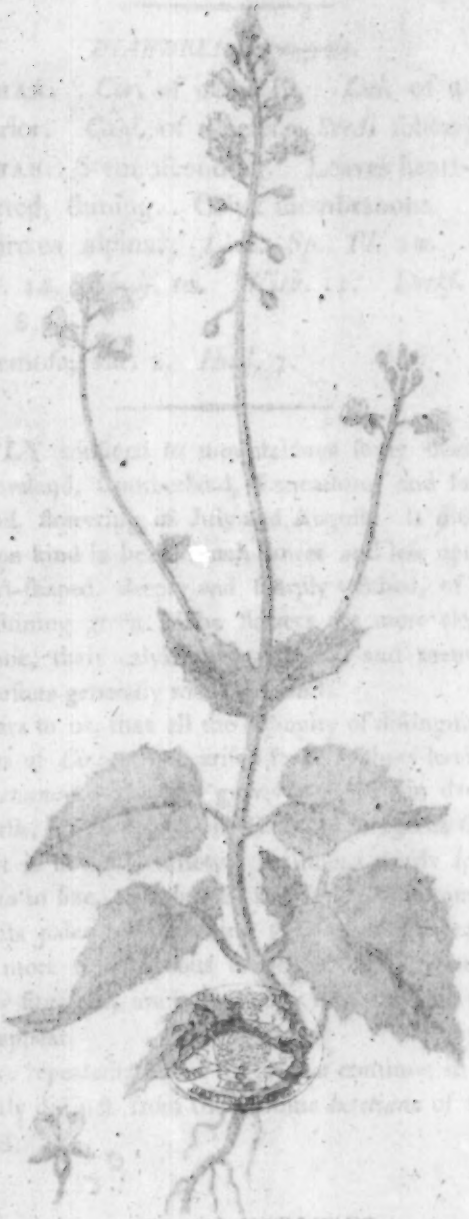
SYN. Circæa lutetiana. *Linn. Sp. Pl.* 12. *Sm. Fl. Brit.* 13. *Hudſ.* 10. *With.* 10. *Relh.* 11. *Sibth.* 9. *Abbot.* 7. *Curt. Lond. faſc.* 3. *t.* 3. *Dickſ. H. Sicc. faſc.* 8. 1. *Raii Syn.* 289.

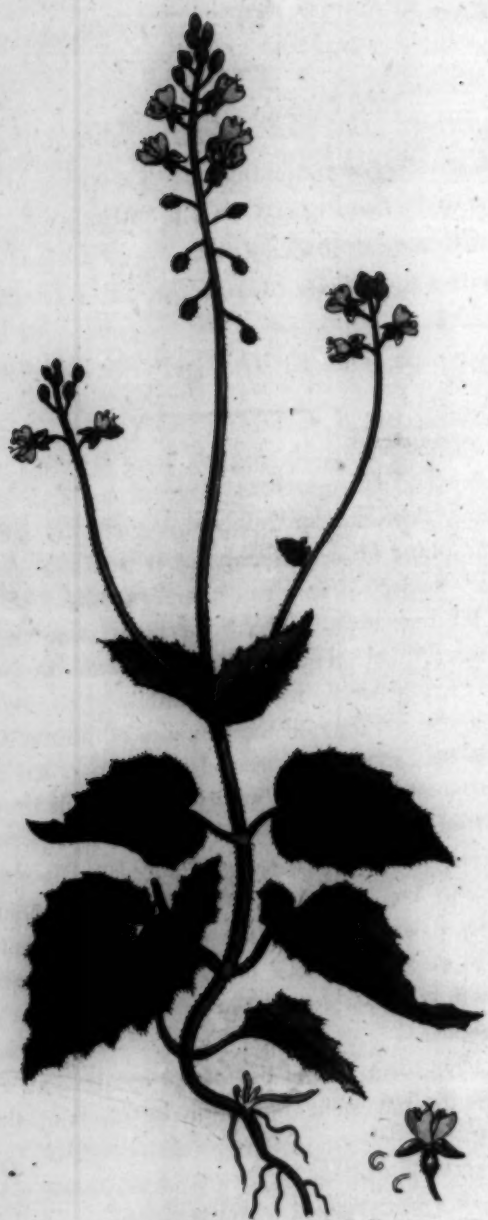
C. racemoſa, var. 1. *Hull.* 6.

NOT unfrequent in ſhady lanes, woods, orchards and yards, flowering in June and July.

Root perennial, creeping, hard to be rooted up where it has once eſtabliſhed itſelf in a favourable ſituation. Stem upright, ſtraight, a foot and half high, round, downy, leafy. Leaves oppoſite, on ſhort ſtalks, ovate, downy, of a darkiſh, dull, and not ſhining, green; their margin waved, edged with ſhort teeth. Flowers in one or more terminal long cluſters; their partial ſtalks ſpreading, and at length reflexed. Calyx-leaves ovate, reflexed, coloured. Petals inverſely heart-ſhaped, white or reddiſh, ſhorter than the ſtamina and ſtyle. Capſule roundiſh, clothed with little hooked briſtles, by which (ſeparating entire from the ſtalk) it ſticks to the coats of animals. The ſeeds nevertheleſs are often abortive.

We know not how this plant obtained its romantic name. It has been conſecrated to Circe and to St. Stephen, and old writers tell us its principal uſe is for amorous purpoſes; but how it is to be applied they are ſilent; and it ſhould ſeem from Gerarde that it has merely been miſtaken for *Mandragora*, a famous charm for procuring love, but to which our *Circæa* has not the moſt remote affinity or reſemblance.





Aug.1.1802. Published by Jas. Sowerby. London.

CIRCÆA alpina.

Mountain Enchanter's Nightſhade.

DIANDRIA Monogynia.

GEN. CHAR. *Cor.* of 2 petals. *Cal.* of 2 leaves, ſuperior. *Capſ.* of 2 cells. *Seeds* ſolitary.

SPEC. CHAR. Stem aſcending. Leaves heart-ſhaped, ſerrated, ſhining. Calyx membranous.

SYN. Circæa alpina. *Linn. Sp. Pl.* 12. *Sm. Fl. Brit.* 14. *Hudſ.* 10. *With.* 11. *Dickſ. H. Sicc. faſc.* 8. 2.

C. racemoſa, var. 2. *Hull.* 7.

CHIEFLY confined to mountainous ſtony ſhady places in Weſtmoreland, Cumberland, Lancaſhire, and ſome parts of Scotland, flowering in July and Auguſt. It differs from the common kind in being much lower and leſs upright, its leaves heart-ſhaped, deeply and ſharply toothed, of a bright and very ſhining green. The flowers are more elegant and vivid in hue, their calyx more coloured and membranous, and the cluſters generally more plentiful.

It appears to us, that all the difficulty of diſtinguiſhing the two ſpecies of *Circæa* has ariſen from authors having taken for the *lutetiana* a plant that grows frequently in deep woods in the North, and is figured in *Fl. Dan. t.* 256 as *C. alpina*, of which it is in fact a variety. It indeed nearly approaches *C. lutetiana* in ſize, uprightneſs, and fewneſs of branches, but differs in its paler more ſhining green, ſerrated leaves, and generally more membranous footſtalks. The flowers, from their ſhady ſituation, are indeed paler than thoſe of *C. alpina* generally appear.

We have repeatedly found the *alpina* continue in a garden permanently diſtinct from the genuine *lutetiana* of the ſouth of England.

CIRCÆA alpina.

Mountain Enchanter's Nightshade.

DIANDRIA Monogynia.

Gen. Char. Cor. of 2 petals. Cal. of 2 leaves, superior. Caps. of 2 cells. Seeds solitary.

Spec. Char. Stem ascending. Leaves heart-shaped, serrated, shining. Calyx membranous.

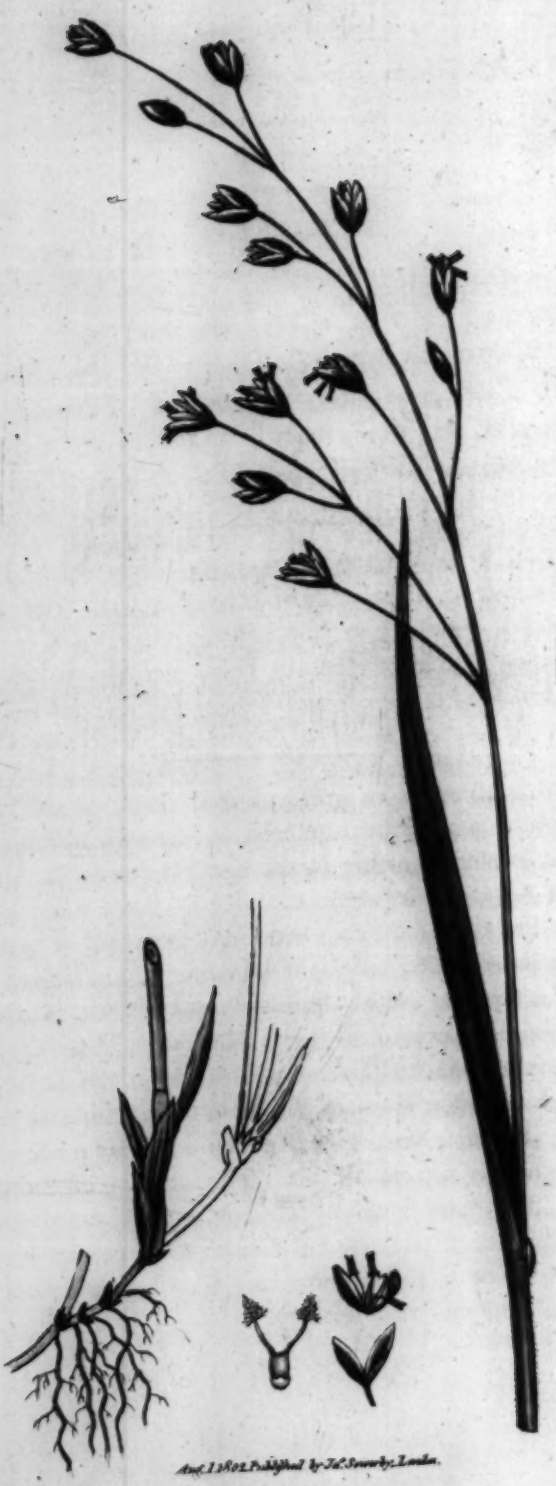
Syn. Circæa alpina. Linn. Sp. Pl. 12. Sm. Fl. Brit. 14. Huds. 10. With. 11. Dick. H. Sinc. Fyfe. 8.

C. racemosa, var. 2. Huds. 7.

CHIEFLY confined to mountainous stony shady places in Westmoreland, Cumberland, Lancashire, and some parts of Scotland, flowering in July and August. It differs from the common kind in being much lower and less upright, its leaves heart-shaped, deeply and sharply toothed, of a bright and very shining green. The flowers are more elegant and vivid in hue, their calyx more coloured and membranous, and the clusters generally more full.

It appears to us, that all the difficulty of distinguishing the two species of Circæa has arisen from authors having taken for the latticina a pale-leaved grass frequently in deep woods in the North, and figured in Fl. Dan. 1259 as C. alpina, of which it is in fact a variety. Hopefeed nearly approaches C. latifolia in size, with broad-oval leaves of 3 inches, but differs in its paler hue. Flowers green, 4-cleft, leaves, and generally more membranous. Found in woods, from their shady situation, are indeed paler than the C. alpine generally appears.

We have repeatedly found the alpina common in a garden permanently distinct from the genuine latifolia of the town of England.



Aug. 1 1802 Published by J.C. Sowerby, London.

MELICA uniflora.

Wood Melic-graſs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, with about 2 flowers, and the rudiment of another between them. *Cor.* of 2 valves.

SPEC. CHAR. Petals beardleſs. Panicle drooping toward one ſide, branched. Flowers erect. Calyx containing only one perfect floret.

SYN. Melica uniflora. *Sm. Fl. Brit.* 91. *With.* 139. *Hull.* 21. *Relh. Suppl.* 1. 8. *Sibth.* 40. *Abbot.* 16. *Curt. Lond. faſc.* 5. *t.* 10. *Dickſ. H. Sicc. faſc.* 8. 6. *Mart. Ruſt. t.* 64.

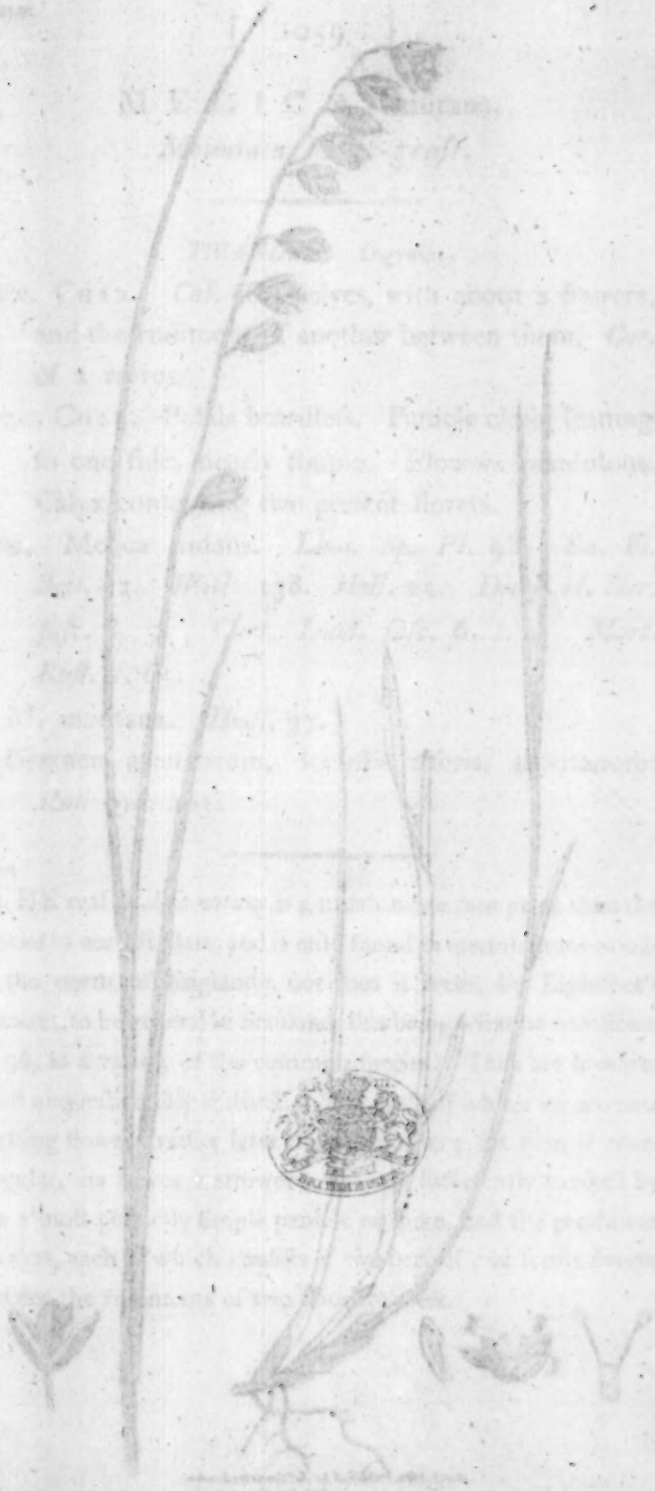
M. nutans. *Hudſ.* 37.

M. Lobelii. *Villars. Dauph. v.* 1. 89. *t.* 3.

Gramen avenaceum nemorenſe, glumis rarioribus ex fuſco xerampelinis. *Raii Syn.* 403.

NOT uncommon in groves and thickets, where its red bloſſoms, ſuſpended by capillary and almoſt inviſible ſtalks, ſeem like inſects dancing in the air. It flowers in May or early in June, and is perennial.

Root fibrous or ſomewhat creeping. Stem a foot and half high, ſlender, leafy, rough, terminating in an elegant looſe ſlender compound panicle, leaning to one ſide, but bearing its flowers erect. Leaves flat, green, thin, rough on the edge and back, with downy ſheaths crowned by a ſhort variable ſtipula. Calyx of 2, rather unequal, purpliſh-brown, elliptical huſks, ſmooth, beardleſs and ribbed, containing only one perfect floret, generally accompanied by an imperfect one ſtanding on a little ſtalk, and conſiſting of 2 or 3 membranous huſks. Corolla of 2 elliptical, concave, ribbed valves, notched at their tips. Antheræ a little prominent, deep yellow or orange-coloured. Stigmas very feathery.



Aug.1.1801. Published by Jas Sowerby, London.

MELICA nutans.

Mountain Melic-graſs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, with about 2 flowers, and the rudiment of another between them. *Cor.* of 2 valves.

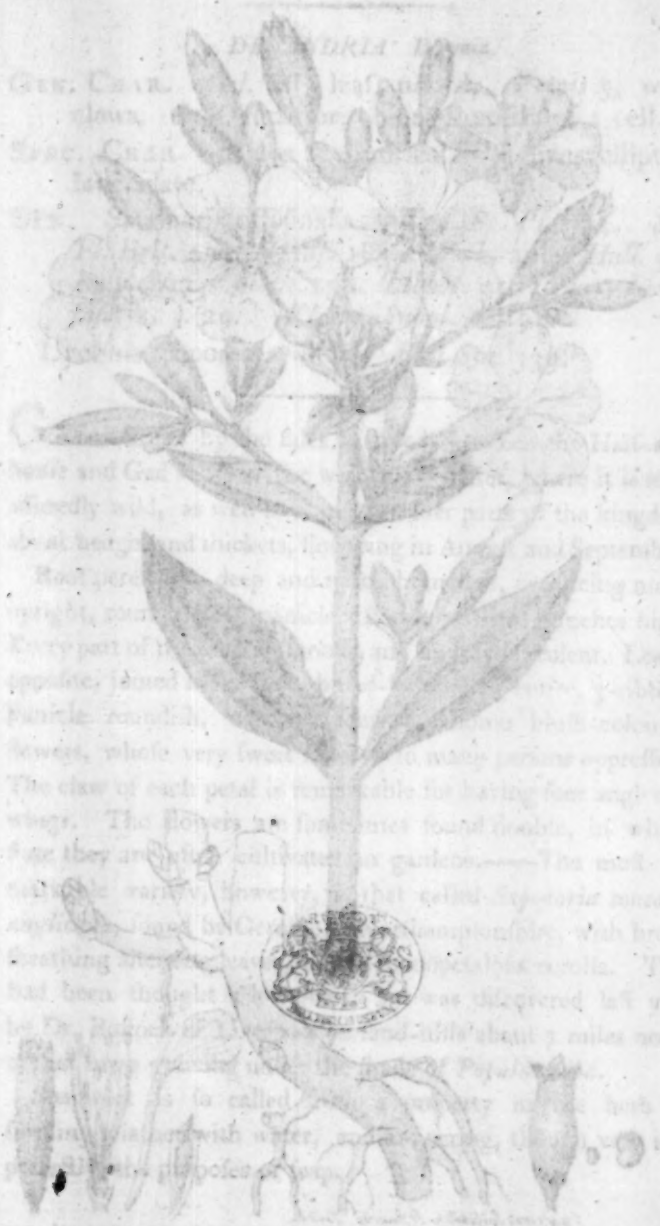
SPEC. CHAR. Petals beardleſs. Panicle cloſe, leaning to one ſide, nearly ſimple. Flowers pendulous. Calyx containing two perfect florets.

SYN. Melica nutans. *Linn. Sp. Pl.* 98. *Sm. Fl. Brit.* 92. *With.* 138. *Hull.* 21. *Dickſ. H. Sicc. faſc.* 8. 5. *Curt. Lond. faſc.* 6. *t.* 4. *Mart. Ruſt. t.* 65.

M. montana. *Hudſ.* 37.

Gramen avenaceum, locuſtis rubris, montanum. *Raii Syn.* 403.

THE real *Melica nutans* is a much more rare plant than the ſpecies in our laſt plate, and is only found in mountainous woods in the north of England; nor does it ſeem, by Lightfoot's account, to be general in Scotland, this being what he mentions, *p.* 96, as a variety of the common ſpecies. They are however moſt unqueſtionably diſtinct. The graſs of which we are now treating flowers rather later than the other; its ſtem is more angular, its leaves narrower; but it is ſufficiently marked by the almoſt perfectly ſimple panicle or ſpike, and the pendulous flowers, each of which conſiſts of two perfect and fertile florets, beſides the rudiments of two abortive ones.



Aug.t 1.1802 Published by J.t Sowerby Londn.

SAPONARIA officinalis.

Soapwort.

DECANDRIA Digynia.

GEN. CHAR. *Cal.* of 1 leaf, naked. *Petals* 5, with claws. *Capſ.* ſuperior, oblong, moſtly of 1 cell.

SPEC. CHAR. Calyx cylindrical. Leaves elliptic-lanceolate.

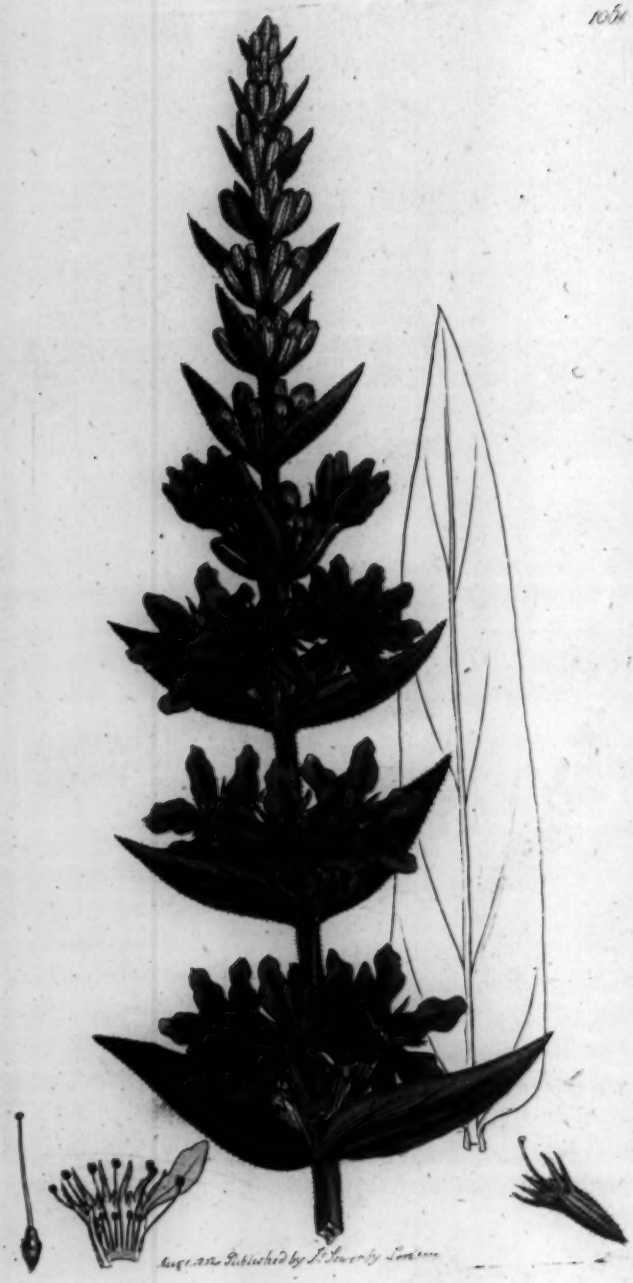
SYN. Saponaria officinalis. *Linn. Sp. Pl.* 584. *Sm. Fl. Brit.* 459. *Hudſ.* 183. *With.* 408. *Hull.* 94. *Relh.* 167. *Sibth.* 138. *Abbot.* 94. *Curt. Lond. faſc.* 2. *t.* 29. *Woodv. Suppl. t.* 251.

Lychnis Saponaria dicta. *Raii Syn.* 339.

GATHERED by the ſides of woods between the Half-way houſe and Gad's-hill in the way to Rocheſter, where it is moſt aſſuredly wild, as well as in many other parts of the kingdom about hedges and thickets, flowering in Auguſt and September.

Root perennial, deep and much branched, producing many upright, round, leafy, panicled ſtems, about 18 inches high. Every part of the herb is ſmooth, and ſlightly ſucculent. Leaves oppoſite, joined at the baſe, broad-lanceolate, entire, 3-ribbed. Panicle roundiſh, of numerous handſome bluſh-coloured flowers, whoſe very ſweet ſcent is to many perſons oppreſſive. The claw of each petal is remarkable for having four angles or wings. The flowers are ſometimes found double, in which ſtate they are often cultivated in gardens.——The moſt remarkable variety, however, is that called *Saponaria concava anglicana*, found by Gerarde in Northamptonſhire, with broad ſheathing alternate leaves, and a monopetalous corolla. This had been thought a loſt plant, but was diſcovered laſt year by Dr. Boſtock of Liverpool on ſand-hills about 7 miles north of that town growing under the ſhade of *Populus alba*.

Soapwort is ſo called from a property in the herb of forming a lather with water, and anſwering, though very imperfectly, the purpoſes of ſoap.



Augt 1st 1804 Published by J. Sowerby London

LYTHRUM Salicaria.

Purple Looſeſtrife.

DODECANDRIA Monogynia.

GEN. CHAR. *Cal.* inferior, with 12 teeth. *Petals* 6, inſerted into the calyx. *Capſ.* with 2 cells, and many ſeeds.

SPEC. CHAR. Leaves oppoſite, lanceolate, heart-ſhaped at the baſe. Flowers ſpiked. Stamina twelve.

SYN. Lythrum Salicaria. *Linn. Sp. Pl.* 640. *Sm. Fl. Brit.* 510. *Hudſ.* 205. *With.* 441. *Hull.* 104. *Relh.* 182. *Sibth.* 149. *Abbot.* 103. *Curt. Lond. faſc.* 3. *t.* 28.

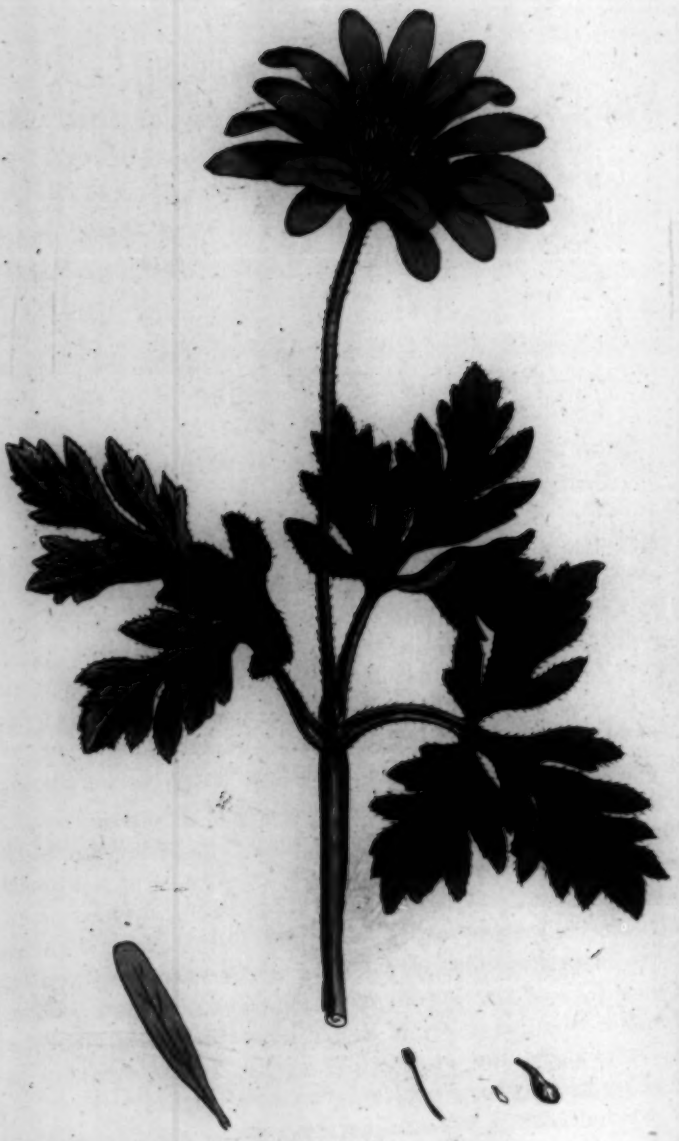
Salicaria vulgaris purpurea, foliis oblongis. *Raii Syn.* 367.

THIS, one of our moſt ſhowy wild plants, is to be ſeen uxuriantly flowering in July and Auguſt on the banks of rivers, ponds and ditches, where it makes a very ornamental appearance. It loves a black boggy ſoil, but will grow in more dry ſituations.

The root is perennial, branched and woody. Stems erect and wand-like, from 2 to 4 feet high, quadrangular, leafy. Leaves ſeſſile, oppoſite, entire, rough on the edge. Flowers in axillary whorls, which all together form a looſe ſpike, of a reddiſh variable purple. Calyx ribbed, with 6 long teeth and as many ſmall intermediate ones. Petals ſtanding within the mouth of the calyx, attached by ſmall points, oblong, waved, all equal and regular. Stamina always 12, in 2 ſets, incurved. Sometimes the pollen of all the 12 antheræ is green, at other times that of the 6 inner ones is yellow. Stigma globoſe. Capſule elliptical, ſmall. Seeds minute and numerous.

Occaſionally the ſtem has 6 angles, and then the leaves ſtand 3 together in whorls.

The other Britiſh ſpecies of *Lythrum*, much the moſt uncommon, may be ſeen *v.* 5. *t.* 292.



Aug.t 1. 1801 Published by Jas Sowerby, London.

ANEMONE apennina.

Blue Mountain Anemone.

POLYANDRIA Polygynia.

GEN. CHAR. *Cal.* none. *Petals* 5—9, or more. *Seeds* ſeveral.

SPEC. CHAR. Seeds pointed, without tails. Stalk ſingle-flowered, furniſhed with a three-leaved, ſtalked, leafy involucrum. Petals lanceolate, numerous.

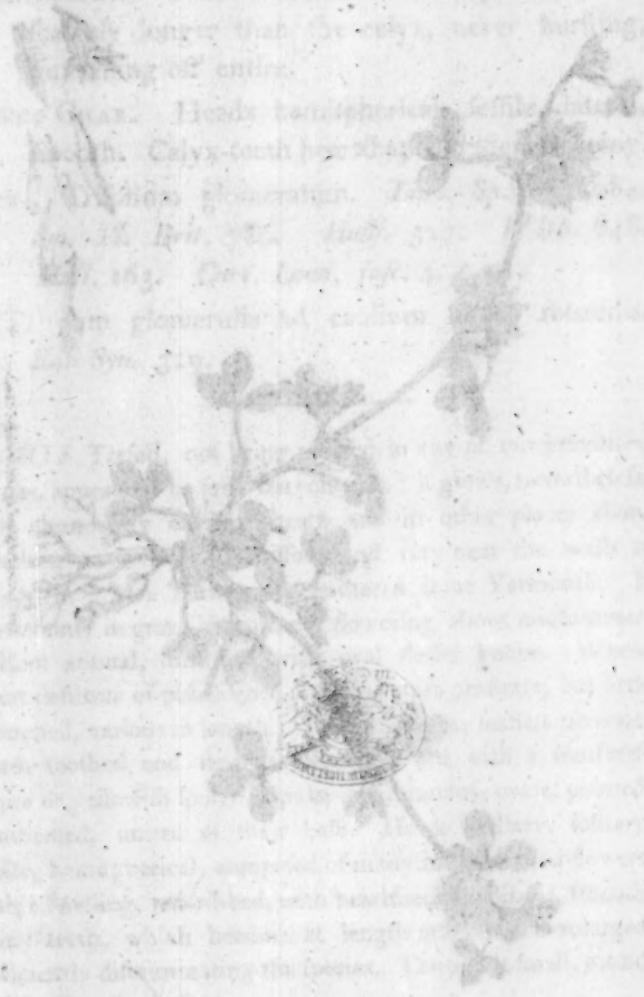
SYN. Anemone apennina. *Linn. Sp. Pl.* 762. *Sm. Fl. Brit.* 581. *Hudſ.* 237. *With.* 500. *Hull.* 120. *Abbot.* 119. *Curt. Lond. faſc.* 6. *t.* 35.

Ranunculus nemoroſus, flore purpuro-cæruleo. *Dill. in Raii Syn.* 259.

THE place of our *Anemone nemoroſa* is in all the groves of Italy ſupplied by this elegant ſpecies, which is not, as its name ſhould imply, peculiar to the Apennine or any other mountains, but rather to lowland woods. We find therefore no difficulty in believing it really wild in thoſe various ſpots, within a few miles of London, where botaniſts for a century paſt have remarked it. Our ſpecimens grew at Wimbleton. It flowers in April, and is perennial.

The root is rather thicker than that of *A. nemoroſa*, and the leaves, though variable in breadth, generally of a broader, more rounded, and obtuſe figure than in that ſpecies. Each leaf of the involucrum is ſubdivided into 3, not 5, leaflets. The flower is formed of about 12 or 16 narrow, lanceolate, bluntiſh, recurved petals, of a rich ſky-blue, hairy on their backs. Stamina pale yellow. We have never obſerved them to be changed into petals.

This pretty plant may eaſily be cultivated on a rather dry light and loamy ſoil, and merits a place among the ſpring flowers in our gardens.



Sept.r 1.1812. Published by J.d Sowerby, London.

TRIFOLIUM glomeratum.

Round-headed Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or leſs capitate. *Pod* ſcarcely longer than the calyx, never burſting, but falling off entire.

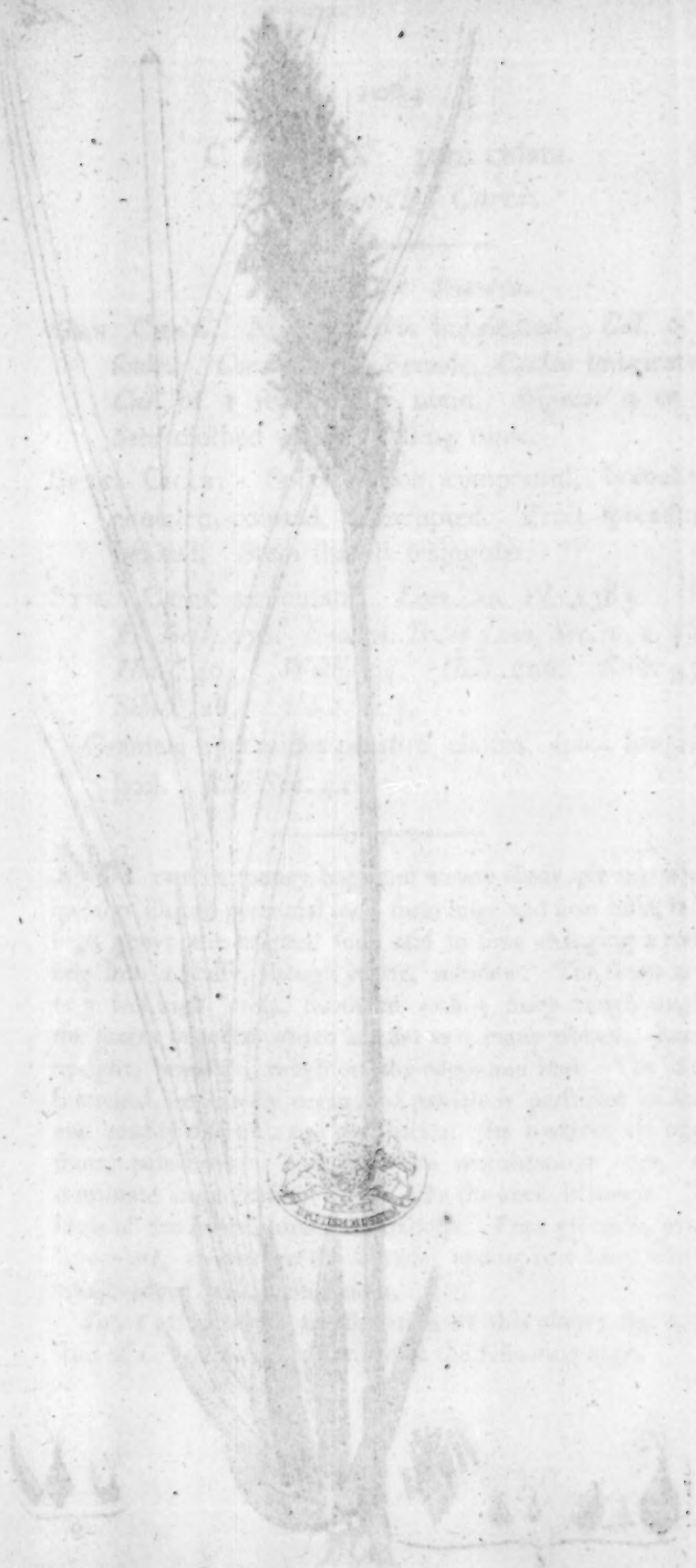
SPEC. CHAR. Heads hemiſpherical, ſeſſile, lateral, ſmooth. Calyx-teeth heartſhaped, reflexed, veiny.

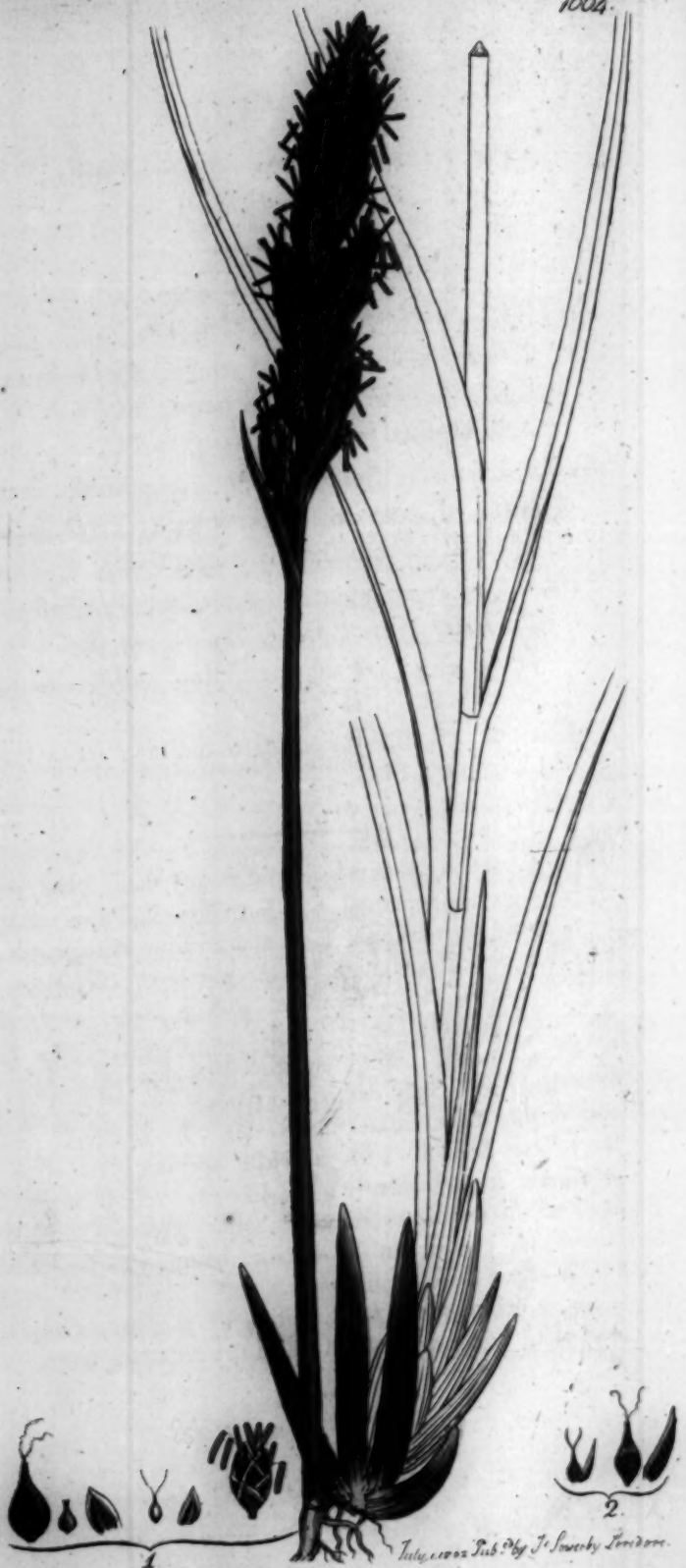
SYN. Trifolium glomeratum. *Linn. Sp. Pl.* 1084. *Sm. Fl. Brit.* 789. *Hudſ.* 327. *With.* 648. *Hull.* 163. *Curt. Lond. faſc.* 4. *t.* 51.

T. cum glomerulis ad caulium nodos rotundis. *Raii Syn.* 329.

THIS Trefoil, not being noticed in any of our provincial Floras, appears to be far from common; it grows, nevertheleſs, very abundantly on Blackheath and in other places about London, as well as in Suffolk and very near the walls of Norwich. Mr. Turner has gathered it at Yarmouth. It occurs only in gravelly paſtures, flowering about midſummer.

Root annual, furniſhed with oval fleſhy knobs. Whole plant deſtitute of pubeſcence. Stems quite proſtrate, but little branched, various in length. Leaves remote; leaflets obovate, neatly toothed and ſtriated, often marked with a tranſverſe white or yellowiſh ſpot. Stipulæ membranous, ovate, pointed, divaricated, united at their baſe. Heads axillary, ſolitary, ſeſſile, hemiſpherical, compoſed of many roſe-coloured flowers. Calyx ſwelling, red-ribbed, with heartſhaped, pointed, ſmooth, veiny teeth, which become at length reflexed and enlarged, ſufficiently diſcriminating the ſpecies. The pod is ſmall, round, and holds a ſingle ſeed.





July 1.1802 Pub.d by J.t Sowerby Londres.

CAREX paniculata.

Great Panicled Carex.

MONOECIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of 1 ſcale. *Cor.* none. Female, *Catkin* imbricated. *Cal.* of 1 ſcale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a ſwelling tunic.

SPEC. CHAR. Spike thrice compound, branched, panicled, pointed, interrupted. Fruit ſpreading, beaked. Stem ſharply triangular.

SYN. Carex paniculata. *Linn. Sp. Pl.* 1383. *Sm. Fl. Brit.* 978. *Gooden. Tr. of Linn. Soc. v.* 2. 164. *Hudſ.* 403. *With.* 94. *Hull.* 206. *Relh.* 351. *Sibth.* 28. *Abbot.* 203.

Gramen cyperoides paluſtre elatius, ſpicâ longiore laxâ. *Raii Syn.* 422.

NOT rare in ſpongy bogs and watery ſhady places, where its large fibrous perennial roots form huge and firm tufts, raiſed high above the original ſoil, and in time changing a rotten bog into a graſſy, though coarſe, meadow. The ſtems are 2 or 3 feet high, erect, furniſhed with 3 ſharp rough angles, the ſpaces between which are flat and many ribbed. Leaves upright, broadiſh, rough on the edges and keel. The large, branched, repeatedly compound panicle is perfected in June, and readily diſcriminates the ſpecies. Its bracteæ are ovate, ſhort, pale-brown, with a white membranous edge, and terminate in a briſtle, which, like the keel, is rough. The keels of the inner glumes are ſmooth. Fruit greeniſh, ovato-lanceolate, convex on the outſide, ending in a long, cloven, rough-edged beak. Stigmas 2.

Fig. 1 exhibits the fructification of this plant; fig. 2, the fruit of *C. teretiuſcula* deſcribed in the following page.

CAREX paniculata.

Great Panicled Carex.

MONOECIA Triandria.

GEN. CHAR. Male, Chaffy imbricated. Cal. of 1 scale. Cor. none. Female, Chaffy imbricated. Cal. of 1 scale. Cor. none. Stigmas 2 or 3. Seed clothed with a swelling tunic.

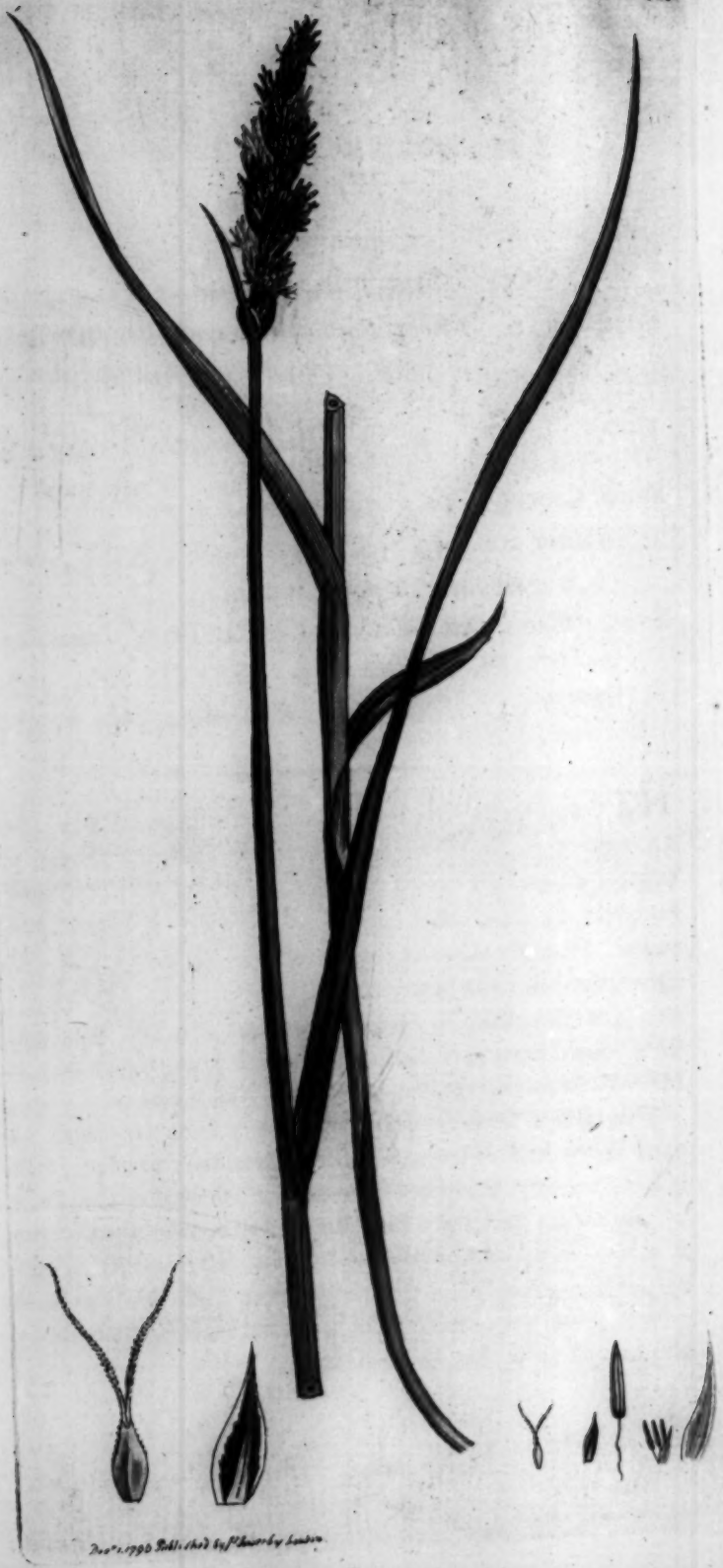
SPEC. CHAR. Spike three compound, branched, panicled, pointed, interrupted. Fruit spreading, beaked. Stem sharply triangular.

SYN. Carex paniculata. Linn. Sp. Pl. 1383. Sm. Fl. Brit. 978. Gooden. Tr. of Linn. Soc. v. 2. 164. Hall. 403. With. 964. Lilli. 206. Relh. 351. Sibth. 28. Abbot. 103.

Gramen cyperoides paniculatum elatius, spica longiore laxa. Rali Syn. 422.

NOT rare in spongy bogs and watery shady places, where its large fibrous perennial roots form huge and firm tufts, raised high above the original soil, and in time changing a rotten bog into a grassy, though coarse, meadow. The stems are 2 or 3 feet high, erect, furnished with 3 sharp rough angles, the spaces between which are flat and many ribbed. Leaves upright, broadish, rough on the edges and keel. The large, branched, repeatedly compound panicle is perfected in June, and readily distinguishes the species. Its bracteæ are ovate, thorn, pale-brown, with a white membranous edge, and terminate in a bristle, which, like the keel, is rough. The keels of the inner glumes are smooth. Fruit greenish, ovato-lanceolate, convex on the outside, ending in a long, cloven, rough-edged beak. Stigmas 3.

Fig. 1 exhibits the fructification of this plant; fig. 2, the fruit of C. [illegible] described in the following page.



Decr. 1790 Published by P. Shewry & Sowerby London

CAREX teretiuſcula.

Leſſer Panicled Carex.

MONOECIA Triandria.

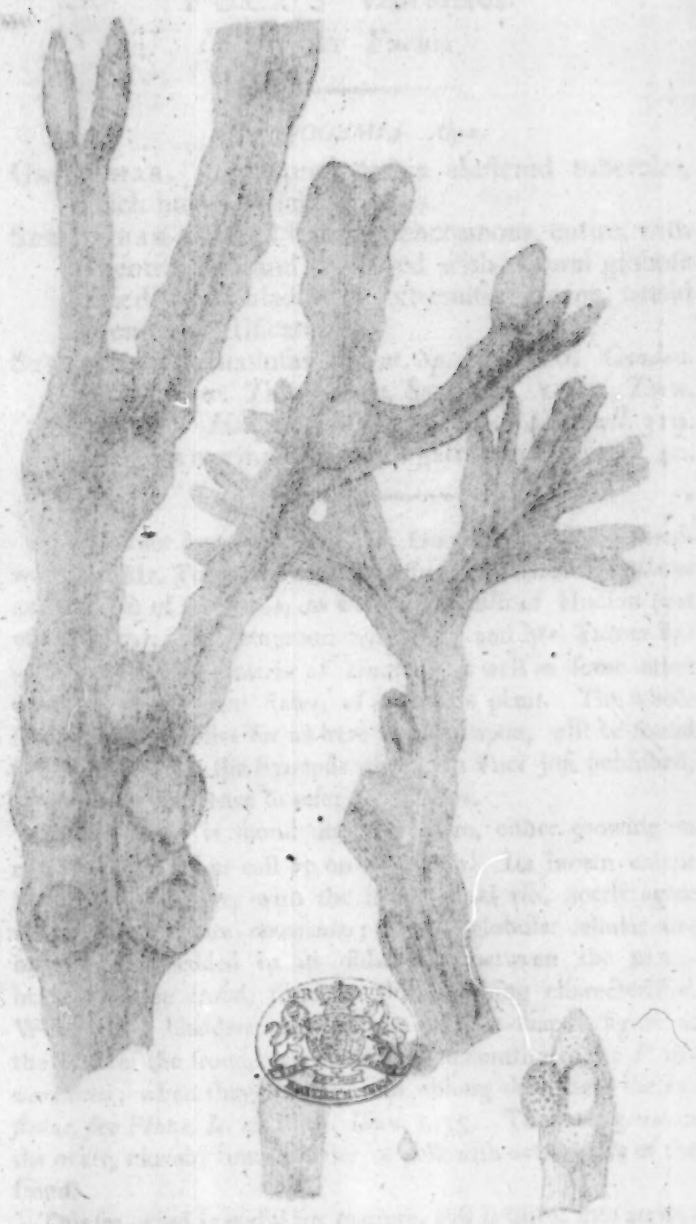
GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of 1 ſcale. *Cor.* none. Female, *Catkin* imbricated. *Cal.* of 1 ſcale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a ſwelling tunic.

SPEC. CHAR. Spike twice or thrice compound, denſe, rather pointed. Spikelets cluſtered. Fruit ſpreading, gibbous. Stem roundiſh.

SYN. Carex teretiuſcula. *Gooden. Tr. of Linn. Soc. v.* 2. 163. *t.* 19. *f.* 3. *Sm. Fl. Brit.* 977. *With.* 95. *Hull.* 206. *Relh. ed.* 2. 365.

RAY appears to have been acquainted with this *Carex*, (ſee his remark in the *Synopſis* under *C. paniculata*,) though it entirely eſcaped the notice of modern botaniſts till Mr. Crowe found it on St. Faith's bogs near Norwich, and at Barton mills. Since Dr. Goodenough publiſhed his deſcription and figure, the plant has been detected in Scotland. We have it alſo from Shropſhire by favour of the Rev. Mr. Williams, and from ſeveral parts of Yorkſhire gathered by Mr. Hailſtone and Mr. W. Brunton. It flowers in May, and is perennial.

This differs from the preceding in not being in any of its parts above half ſo large. The ripe fruit (ſee *t.* 1064. *f.* 2.) is more tumid: the ſpike leſs compound, more denſe, and not by any means panicled: the ſpaces between the angles of the ſtem are convex and prominent, not flat, whence that roundneſs of ſtem expreſſed in the ſpecific name: finally, the plants grow ſeparate, not forming tufts, a circumſtance pointed out by Ray as well as by Dr. Goodenough.



Sept.1.1802. Published by Jas. Sowerby, London.

FUCUS veſiculoſus.

Bladder Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

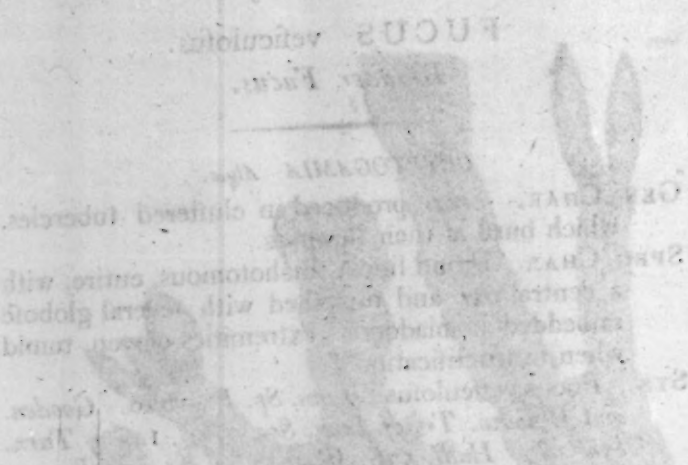
SPEC. CHAR. Frond linear, dichotomous, entire, with a central rib, and furniſhed with ſeveral globoſe imbedded air-bladders: extremities cloven, tumid when in fructification.

SYN. Fucus veſiculoſus. *Linn. Sp. Pl.* 1626. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 144. *Turn. Syn.* 117. *Hudſ.* 576. *With. v.* 4. 84. *Hull.* 319. F. ſive Alga marina latiſolia vulgatiſſima. *Raii Syn.* 40.

WE cannot but agree with Dr. Goodenough, Mr. Woodward and Mr. Turner in reducing *Fucus divaricatus*, *inflatus* and *ſpiralis* of Linnæus, as well as *volubilis* of Hudſon (not of Linnæus), to the common *veſiculoſus*; and Mr. Turner has juſtly added the *linearis* of Hudſon, as well as ſome other varieties, or different ſtates, of the ſame plant. The whole ſubject, too extenſive for us here to enter upon, will be found fully illuſtrated in the Synopſis of Britiſh Fuci juſt publiſhed, to which we beg leave to refer our readers.

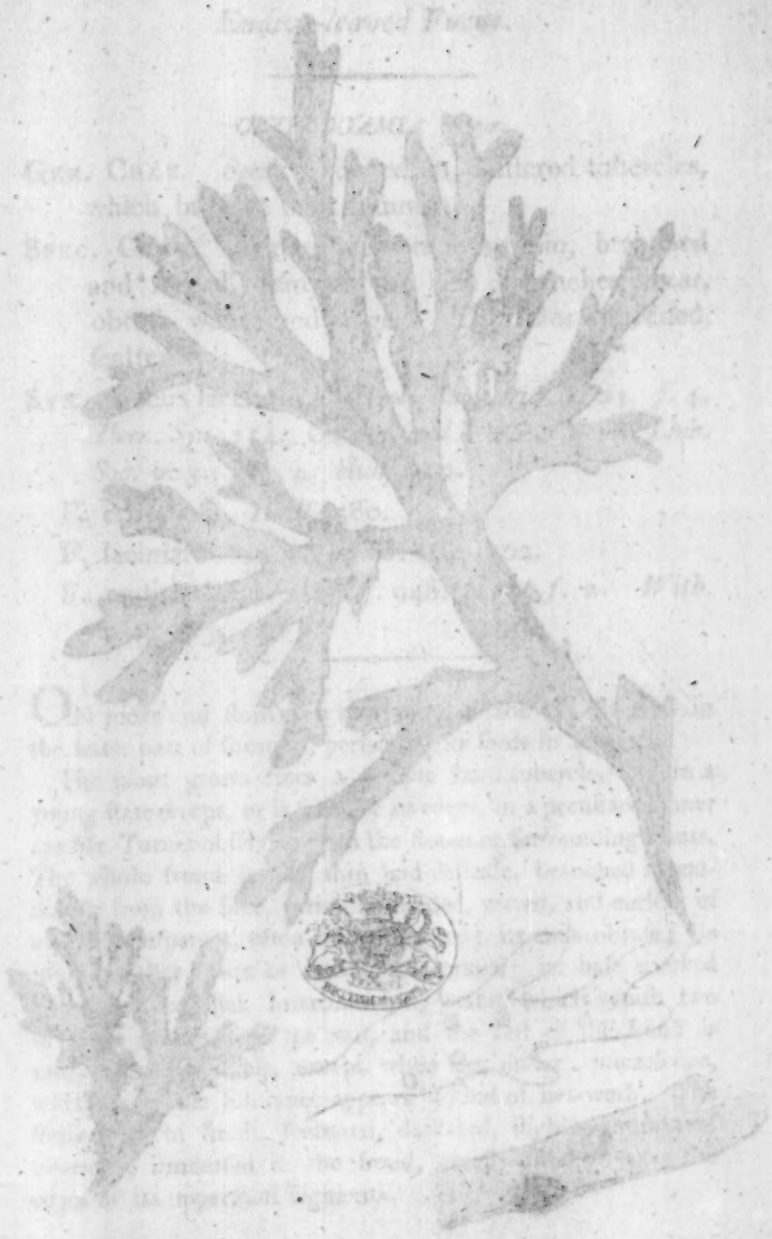
F. veſiculoſus is found on every ſhore, either growing on rocks and ſtones, or caſt up on the beach. Its brown colour and leathery texture, with the longitudinal rib, nearly agree with *F. ſerratus* and *ceranoides*; but the globular cellular air-bladders, imbedded in its ſubſtance between the membranes of the frond, form its diſtinguiſhing characteriſtic. When theſe bladders coaleſce into a heart-ſhaped figure at the forks of the frond, that circumſtance conſtitutes the *F. divaricatus*; when they are large and oblong they mark the *inflatus*, ſee *Plant. Ic. ex Herb. Linn. t.* 75. The ſeeds grow in the ovate, cloven, tumid, paler or yellowiſh extremities of the frond.

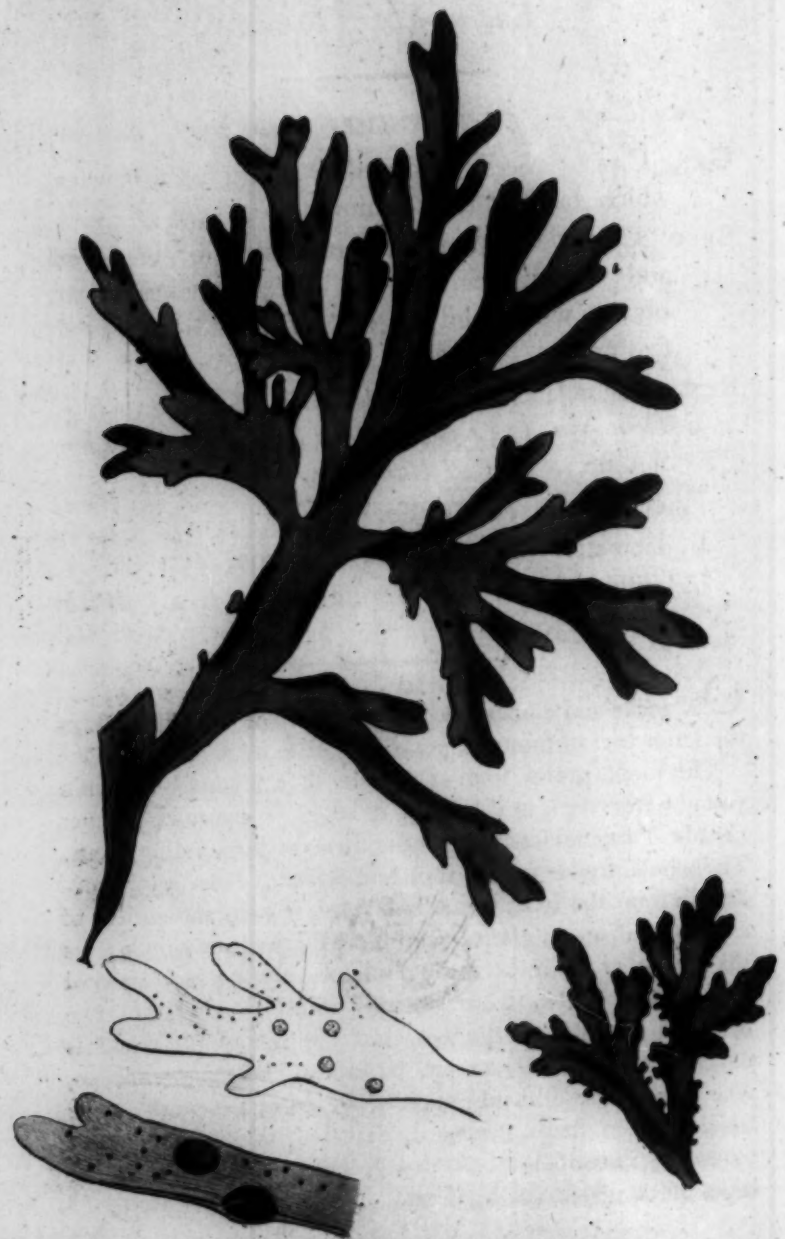
This ſea-weed is uſeful for manure, and is burnt into an impure alkaline ſalt called *kelp*, uſed in making ſoap and glaſs.



FUCUS Incrassatus.

Thick-leaved Fucus.





Sept.r 1.1802. Published by Ja.s Sowerby, London.

FUCUS laceratus.

Endive-leaved Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

SPEC. CHAR. Frond membranous, thin, branched and forked, veiny at the baſe; branches linear, obtuſe, waved and jagged. Tubercles imbedded, ſcattered.

SYN. Fucus laceratus. *Gmel. Fuci*, 179. *t.* 21. *f.* 4. *Turn. Syn.* 154. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 155, *α*. *Hull.* 320.

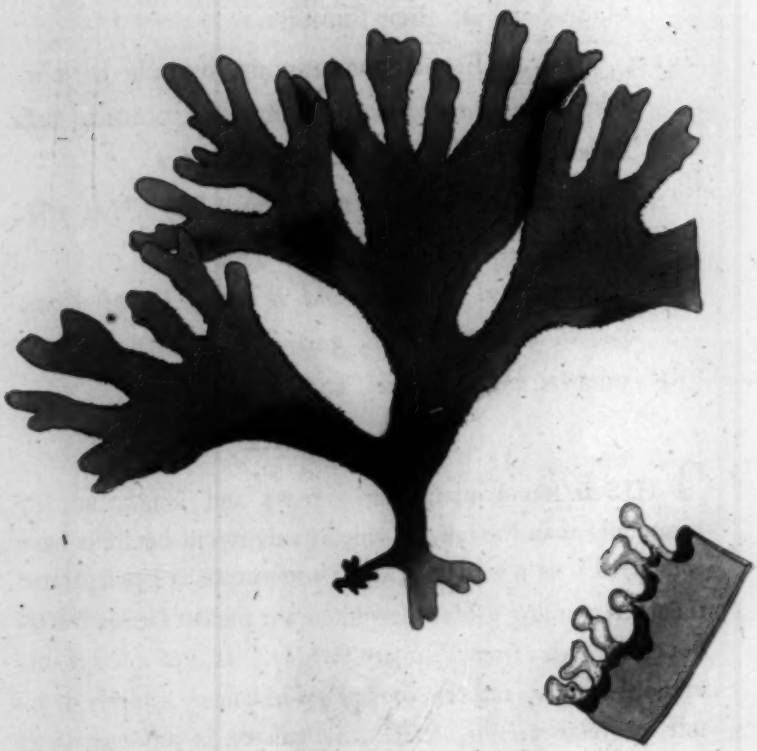
F. criſpatus. *Hudſ.* 580.

F. laciniatus var. 1. *With. v.* 4. 102.

F. endiviæfolius. *Lightf.* 948. *t.* 32. *f.* 2. *With. v.* 4. 103.

ON rocks and ſtones on moſt parts of the Britiſh coaſt in the latter part of ſummer, perfecting its ſeeds in autumn.

The plant grows from a minute hard tubercle, and in a young ſtate creeps, or is fixed by its edges, in a peculiar manner (as Mr. Turner obſerves) upon the ſtones or ſurrounding plants. The whole frond is very thin and delicate, branched immediately from the baſe, variouſly divided, waved, and curled, of a pale, tranſparent, often browniſh, red; its ends obtuſe; its margin either entire or minutely lacerated; its baſe marked with dark, parallel, interbranching veins, which vaniſh two or three inches from the root, and the reſt of the frond is uniform and veinleſs, except when ſeen under a microſcope, when its whole ſubſtance appears a kind of net-work. The ſeeds grow in ſmall, ſcattered, dark-red, ſlightly prominent tubercles, immerſed in the frond, chiefly ſituated near the edges of its uppermoſt ſegments.



Sept.r 1 1802 Published by Jas Sowerby London

FUCUS laciniatus.

Jagged Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

SPEC. CHAR. Frond membranous, branched, veinleſs; branches dilated, palmate, obtuſe, flat. Tubercles in the minute leafy fringe.

SYN. Fucus laciniatus. *Hudſ.* 579. *Turn. Syn.* 161. *With. v.* 4. 103. *var.* 2. *Lightf.* 947.

F. laceratus γ. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 156. *Hull.* 320.

F. ciliatus. *Gmel. Fuci*, 176. *t.* 21. *f.* 1.

THIS is found on ſubmarine rocks and ſtones, but leſs commonly than the laſt, of which many recent botaniſts have conſidered it as a variety. Mr. Turner however has ſeparated them. According to his obſervations the preſent ſpecies fructifies earlier, viz. from February to May. It is of a leſs membranous texture, rather more opaque in colour, entirely deſtitute of veins or ribs, ſcarcely reticulated in any part of its ſubſtance; its form is alſo more dilated and palmate, flat, not undulated, at the margin. When perfect the edge becomes thickly fringed with abrupt leafy undulating proceſſes, in which Lightfoot aſſures us the ſeeds are lodged. This we have not been ſo fortunate as to ſee; but, if correct, it leaves no doubt as to the certainty of the ſpecies.

Sept.r 1.1801. Published by Jas. Sowerby, London.

FUCUS ciliatus.

Ciliated Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

SPEC. CHAR. Frond membranous, tough, pinnatifid, clothed and fringed with ſcattered, awl-ſhaped, moſtly ſimple, proceſſes, bearing the ſeeds in a globular tubercle.

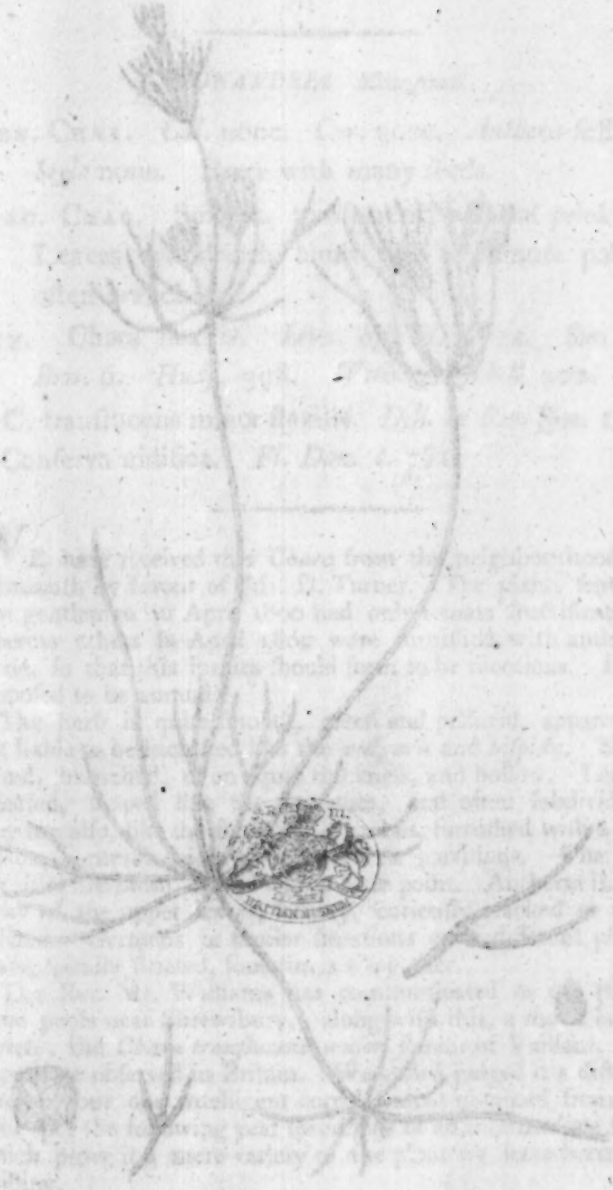
SYN. Fucus ciliatus. *Linn. Mant.* 136. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 160. *Turn. Syn.* 169. *Hudſ.* 580. *Hull.* 321. *Lightf.* 944.

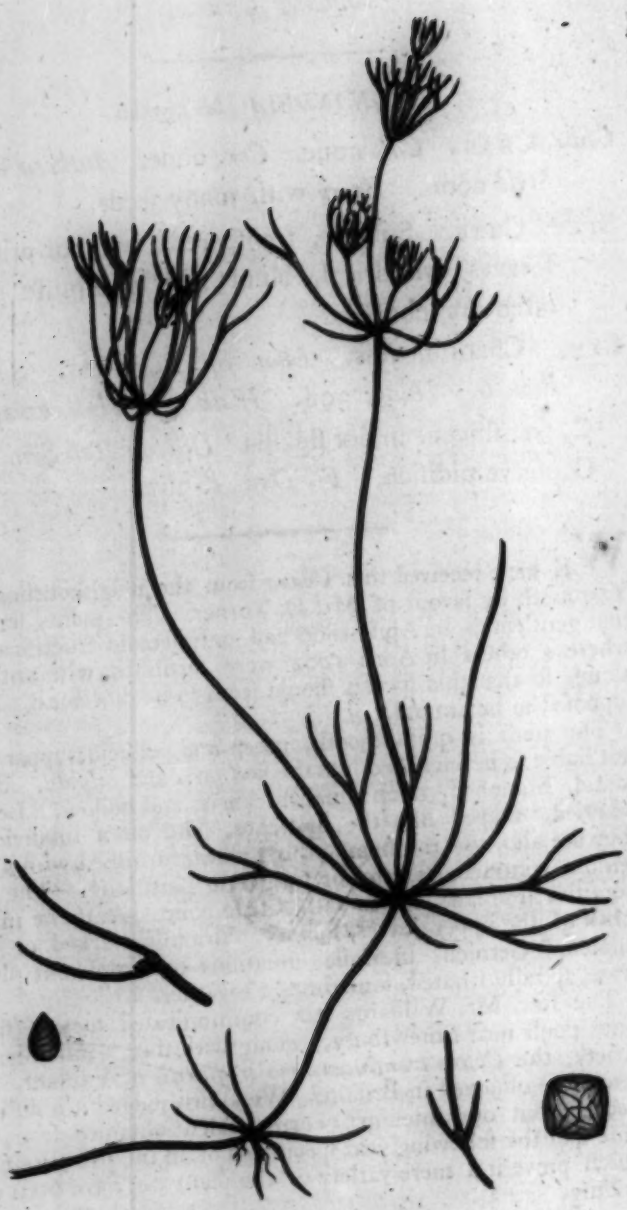
F. holoſetaceus. *Gmel. Fuci,* 177. *t.* 21. *f.* 2. *With. v.* 4. 104.

F. membranaceus rubens anguſtifolius, marginibus ligulis armatis. *Raii Syn.* 47.

NOT uncommon on the coaſt, eſpecially in the ſouth and weſt of England, bearing its fruit in the winter months.

Root of many branching round fibres. Frond membranous, but more inclining to coriaceous than in the two laſt, of a dark opaque red; its form more or leſs regularly pinnatifid, very various in breadth, its ſegments acute; the edges fringed, and the ſurface more or leſs thickly clothed, with awl-ſhaped, ſpreading, moſtly ſimple, proceſſes, ſome of which bear the ſeeds in a ſolitary globular tubercle, generally, but not always, terminal. *F. jubatus* of the *Linn. Tranſ.* ſeems, as Dr. Goodenough ſuſpected, a variety of this with long luxuriant barren ciliæ. Some very ſlender ſpecimens of *F. ciliatus*, ſent by Sir T. Frankland from Devonſhire and the Iſle of Wight, (ſee our figure) might be taken for another ſpecies, were it not for intermediate ones which prove them not to be diſtinct.





Sept.r 1.1801. Published by Ja.s Sowerby, London.

CHARA flexilis,
Smooth Chara.

MONANDRIA Monogynia.

GEN. CHAR. *Cal.* none. *Cor.* none. *Anthera* ſeſſile. *Style* none. *Berry* with many ſeeds.

SPEC. CHAR. Smooth, tranſparent, without prickles. Leaves cylindrical, blunt with a minute point, often branched.

SYN. Chara flexilis. *Linn. Sp. Pl.* 1624. *Sm. Fl. Brit.* 6. *Hudſ.* 398. *With.* 3. *Hull.* 202.

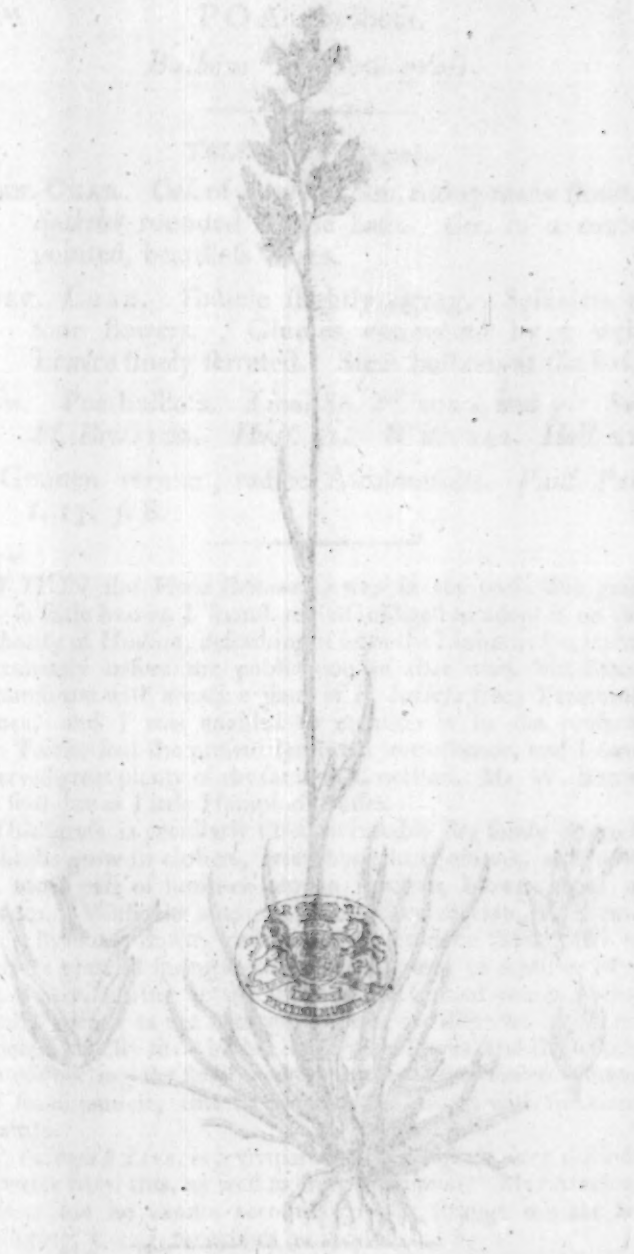
C. tranſlucens minor flexilis. *Dill. in Raii Syn.* 133.

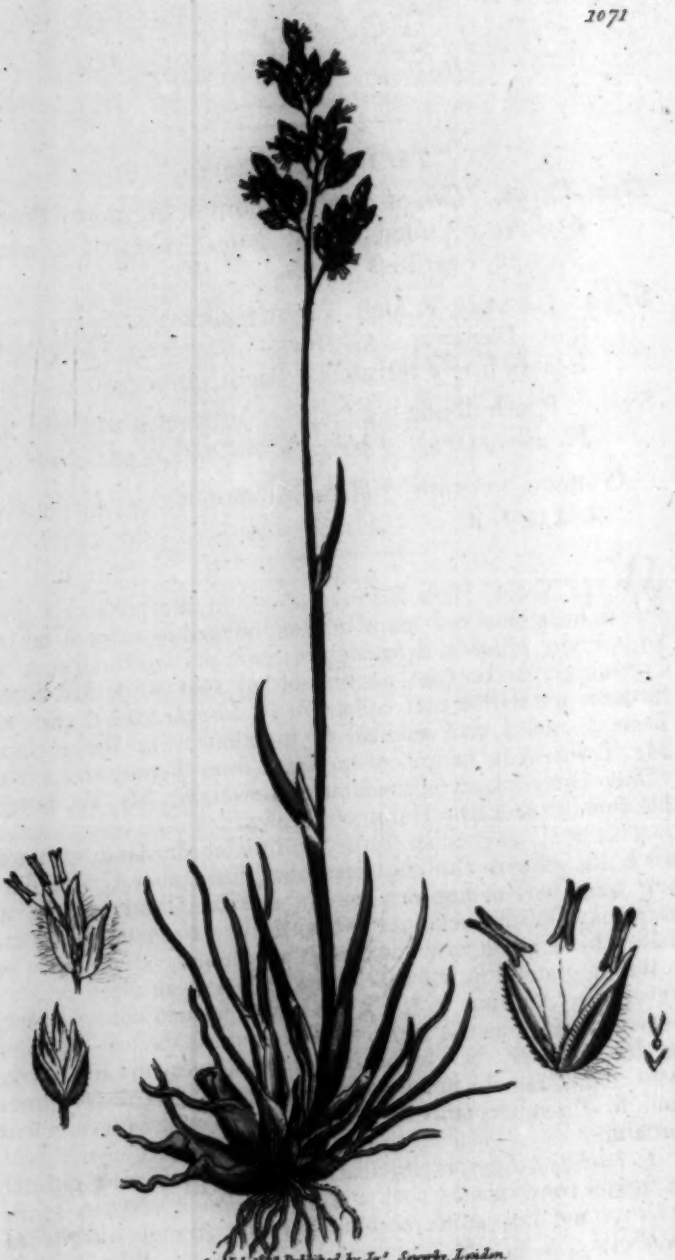
Conferva nidifica. *Fl. Dan. t.* 761.

WE have received this *Chara* from the neighbourhood of Yarmouth by favour of Mr. D. Turner. The plants ſent by that gentleman in April 1800 had only female fructification, whereas others in April 1802 were furniſhed with antheræ alone, ſo that this ſpecies ſhould ſeem to be dioecious. It is ſuppoſed to be annual.

The herb is quite ſmooth, green and pellucid, apparently not liable to be incruſted like the *vulgaris* and *biſpida*. Stem round, branched, of an equal thickneſs, and hollow. Leaves whorled, ſhaped like the branches, and often ſubdivided; they are alſo, like the ſtem and branches, furniſhed with a few remote contracted joints, or tranſverſe partitions. The extremities are blunt, tipped with a little point. Antheræ in the forks of the upper leaves, ſolitary, curiouſly cracked or reticulated. Germens in ſimilar ſituations on a different plant, ovate, ſpirally ſtriated, ſometimes 2 together.

The Rev. Mr. Williams has communicated to us, (from ſome pools near Shrewſbury,) along with this, a much larger variety, the *Chara tranſlucens major flexilis* of Vaillant, not heretofore obſerved in Britain. We at firſt judged it a diſtinct ſpecies; but our intelligent correſpondent obtained from the ſame ſpot the following year ſpecimens of an intermediate ſize, which prove it a mere variety of the plant we have been deſcribing.





Sept.r 1. 1802. Published by Ja.s Sowerby, London.

POA bulboſa.

Bulbous Meadow-graſs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the baſe. *Cor.* of 2 ovate, pointed, beardleſs valves.

SPEC. CHAR. Panicle ſlightly zigzag. Spikelets of four flowers. Glumes connected by a web. Leaves finely ſerrated. Stem bulbous at the baſe.

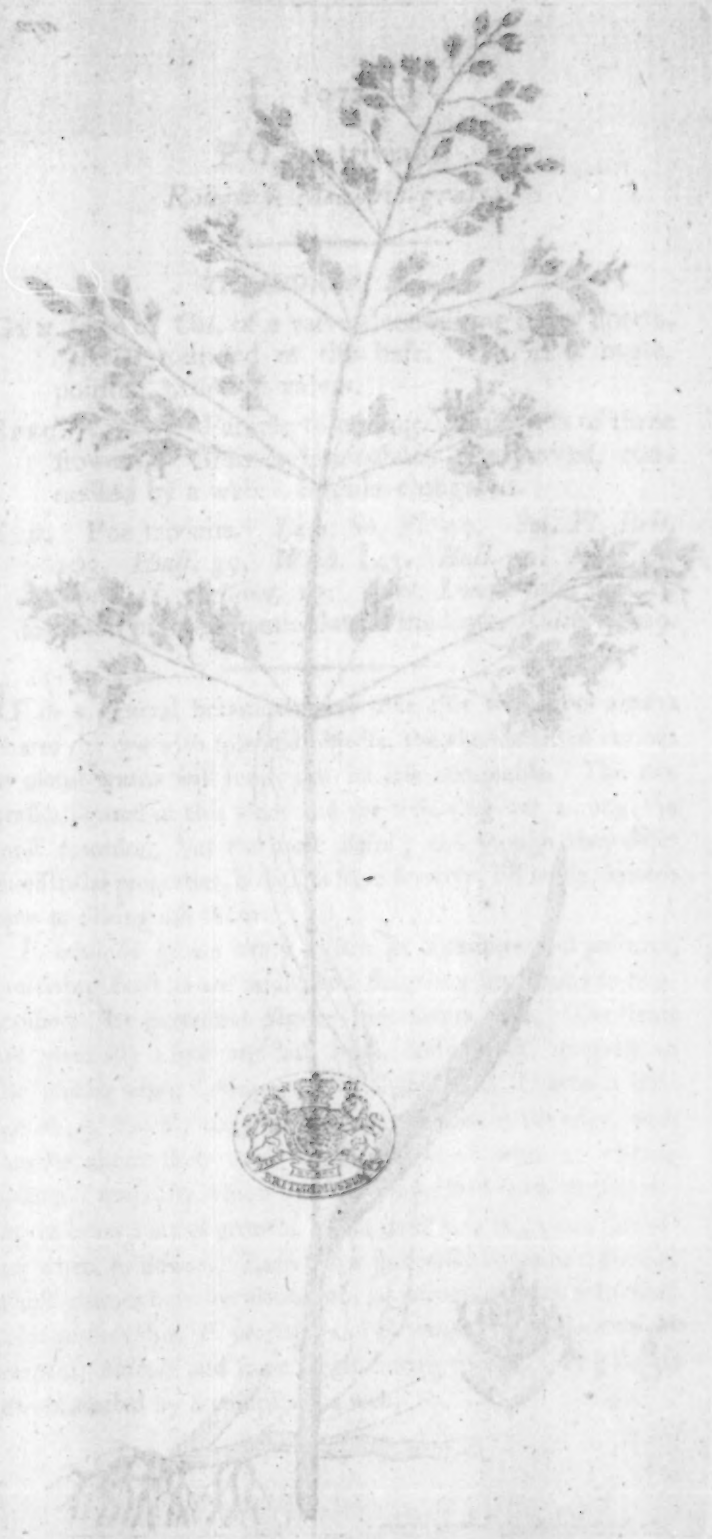
SYN. Poa bulboſa. *Linn. Sp. Pl.* 102 *α* and *γ*. *Sm. Fl. Brit.* 102. *Hudſ.* 41. *With.* 142. *Hull.* 21.

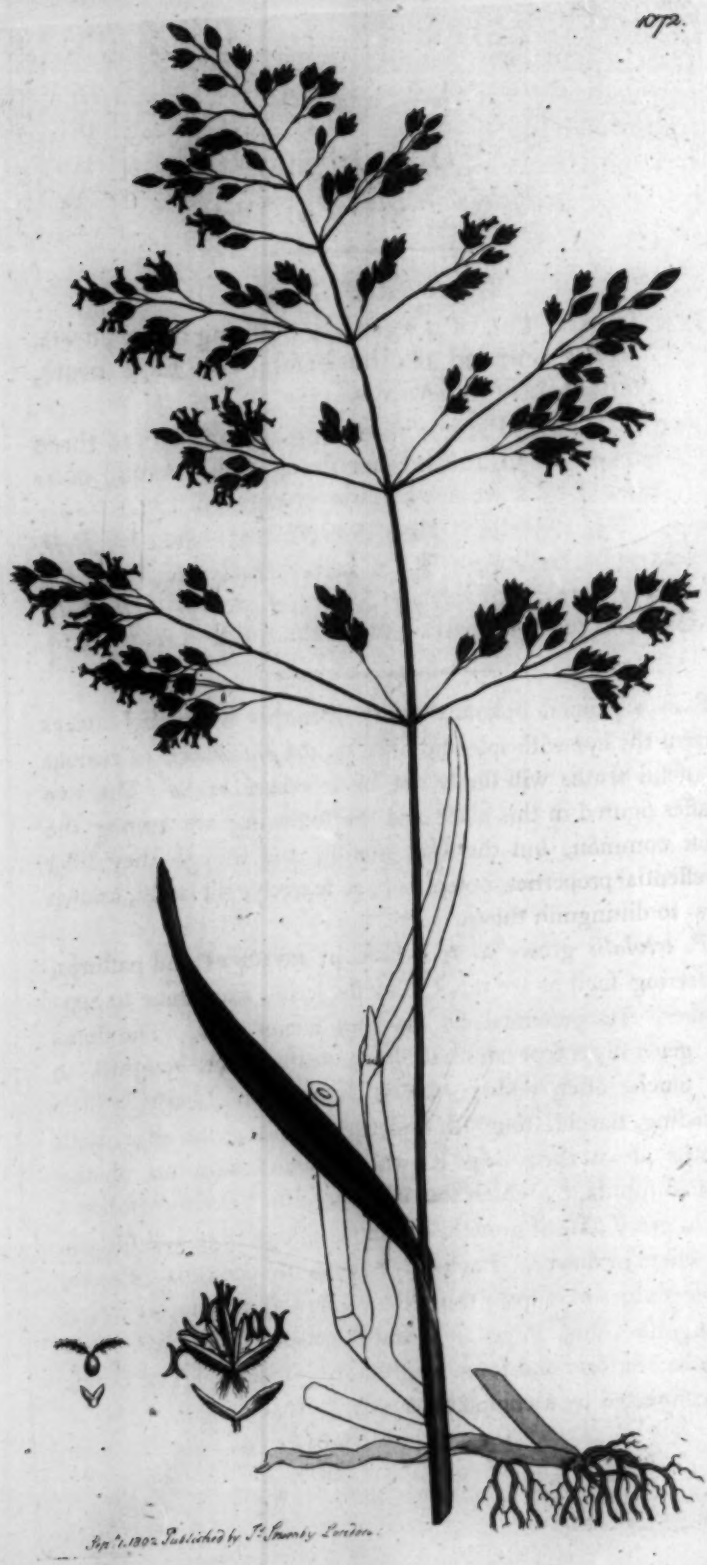
Gramen vernum, radice Aſcalonitidis. *Vaill. Par. t.* 17. *f.* 8.

WHEN the *Flora Britannica* was in the preſs this graſs was ſo little known I found myſelf obliged to adopt it on the authority of Hudſon, deſcribing it from the Linnæan ſpecimen. Fortunately before the publication of that work Mr. Stone favoured me with a native plant of *P. bulboſa* from Yarmouth Denes, and I was enabled to mention it in the preface. Mr. Turner ſent the preſent ſpecimen from thence, and I have obſerved great plenty of the ſame at Loweſtoft. Mr. W. Borrer has found it at Little Hampton, Suſſex.

This graſs is peculiarly fitted to inhabit dry ſandy ground. Its bulbs grow in cluſters, reſembling little onions, and during moſt part of ſummer remain inactive, blown about at random. With the autumnal rains they vegetate, fix themſelves by long downy radicles, then produce thick tufts of leaves (a grateful ſpring food for cattle); and in April or May they flower, having in the mean while formed young bulbs, which, as ſoon as the herbage withers, are diſperſed like their predeceſſors. By theſe bulbs, the ſerrated leaves, and the woolly web connecting the florets, added to the broad veinleſs glumes and ſmall panicle, this ſpecies may be known with ſufficient certainty.

P. bulboſa β Linn. is a viviparous oriental graſs, very diſtinct in ſpecies from this, as well as from *P. alpina*. Mr. Aſzelius informs me he cannot account for the ſtrange miſtake in Withering, *p.* 143, for which he is quoted.





Sept.1.1802. Published by J.t Sowerby London.

POA trivialis.

Roughiſh Meadow-graſs.

TRIANDRIA Digynia.

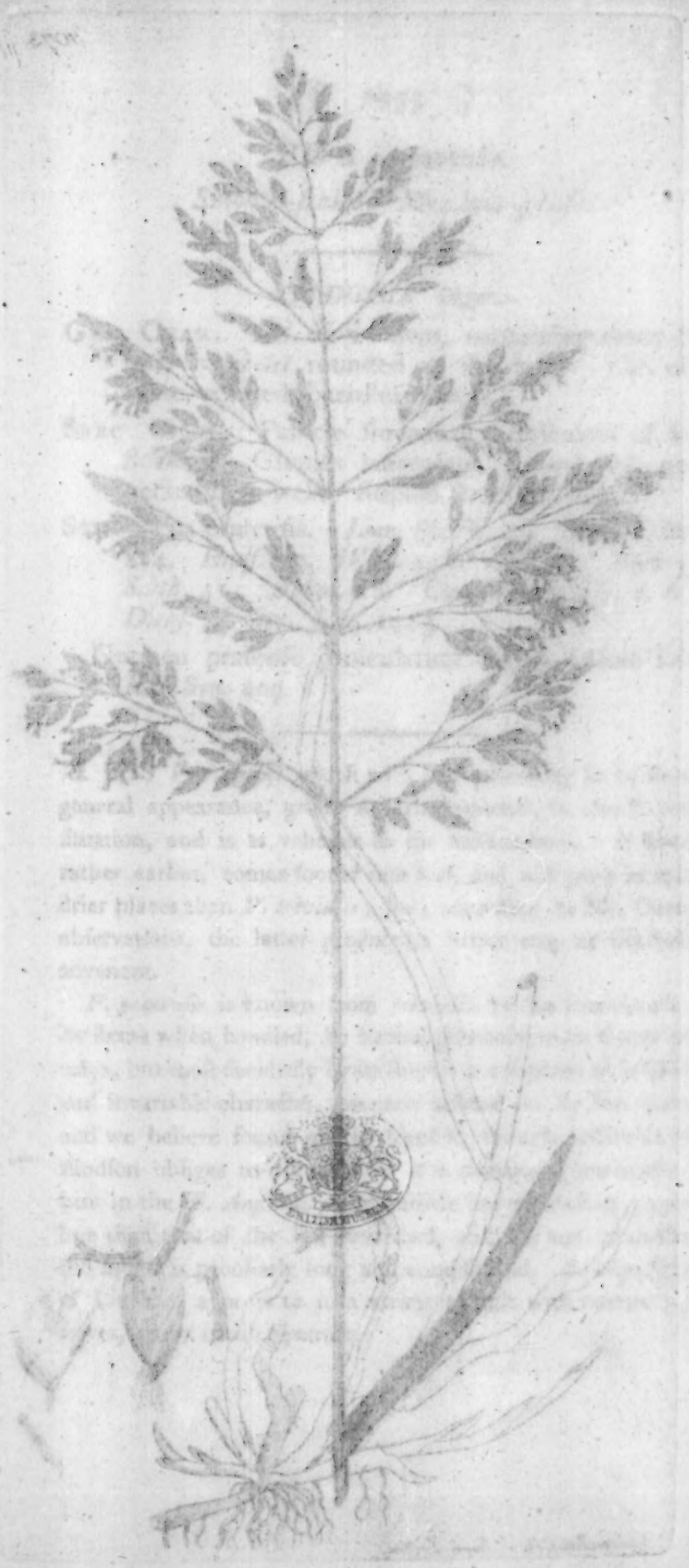
GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the baſe. *Cor.* of 2 ovate, pointed, beardleſs valves.

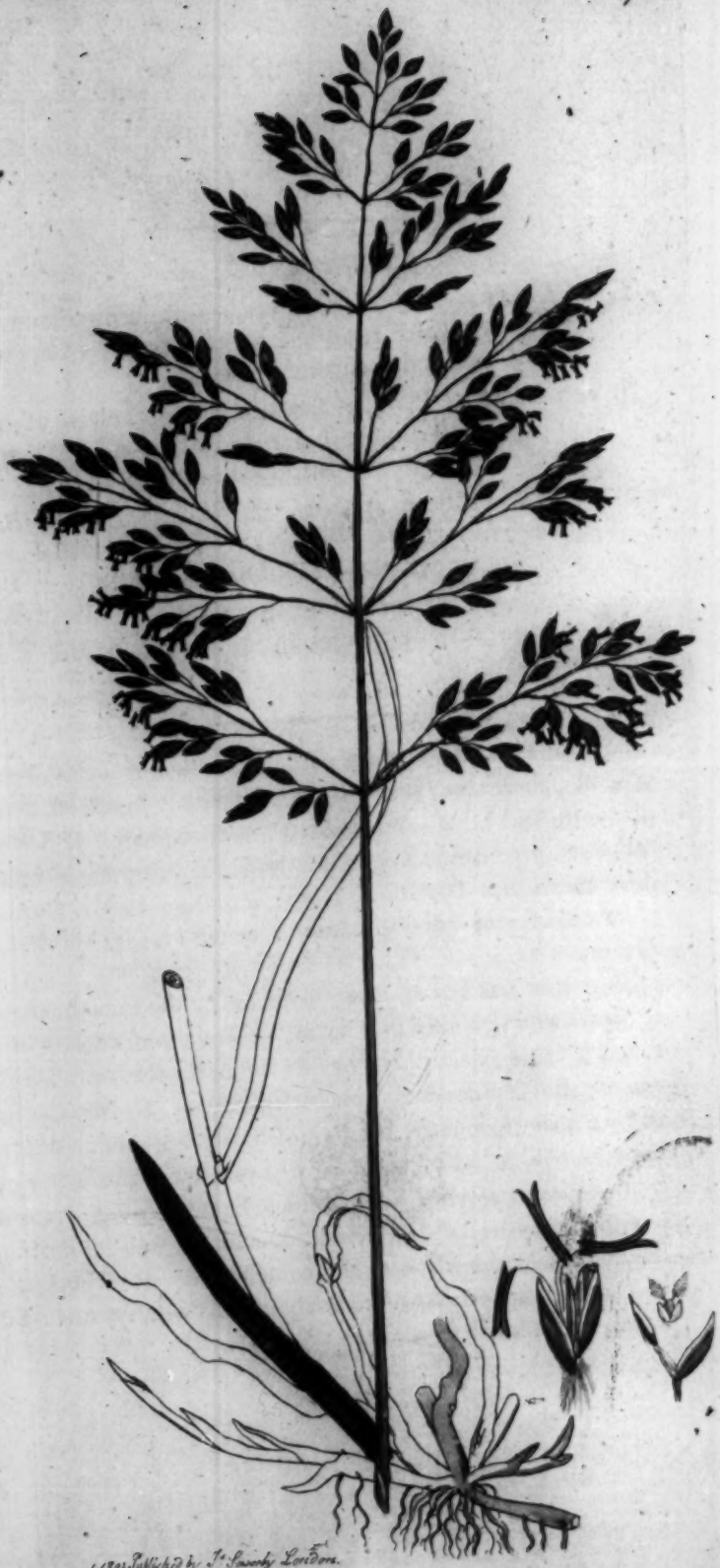
SPEC. CHAR. Panicle ſpreading. Spikelets of three flowers. Glumes lanceolate, five-nerved, connected by a web. Stipula elongated.

SYN. Poa trivialis. *Linn. Sp. Pl.* 99. *Sm. Fl. Brit.* 103. *Hudſ.* 39. *With.* 143. *Hull.* 22. *Relh.* 33. *Sibth.* 41. *Abbot.* 17. *Curt. Lond. faſc.* 2. *t.* 6. Gramen pratenſe paniculatum medium. *Raii Syn.* 409.

IF in a general botanical work like this we cannot always charm the eye with ſplendid objects, the elucidation of curious or uſeful truths will ſurely not be leſs acceptable. The two graſſes figured in this plate and the following are among the moſt common, but the moſt uſeful; and though they differ in eſſential properties, botaniſts have ſcarcely, till lately, known how to diſtinguiſh them.

P. trivialis grows every where in meadows and paſtures, preferring ſuch as are moiſt, and flowering from June to September. Its perennial fibrous root forms tufts. The ſtems are generally a foot and half high, leafy, erect, roughiſh to the touch, often taking root at their baſe. Leaves a little ſpreading, flaccid, roughiſh underneath and at the edge, with ſheaths about their own length, crowned with an oblong pointed ſtipula, by which this is diſtinguiſhed from the following in every ſtate of growth. The panicle is large and ſpreading when in flower. Each calyx generally contains 3 florets, whoſe glumes have five ſtrong ribs or nerves; a character which diſtinguiſhes this, *P. pratenſis* and *P. annua*, from *alpina*, *ſubcærulea*, *bulboſa* and ſome neighbouring ſpecies. The florets are connected by a conſpicuous web.





1801. Published by Jas Sowerby, London.

POA pratenſis.

Smooth-ſtalked Meadow-graſs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the baſe. *Cor.* of 2 ovate, pointed, beardleſs valves.

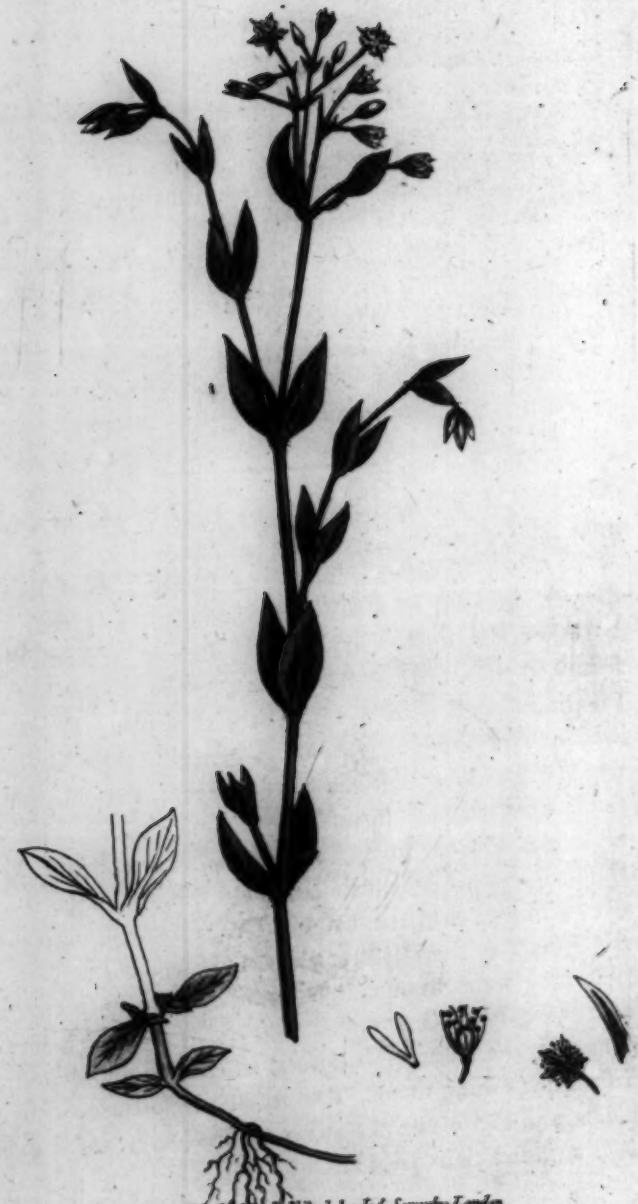
SPEC. CHAR. Panicle ſpreading. Spikelets of four flowers. Glumes lanceolate, five-nerved, connected by a web. Stipula ſhort and blunt.

SYN. Poa pratenſis. *Linn. Sp. Pl.* 99. *Sm. Fl. Brit.* 104. *Hudſ.* 39. *With.* 141. *Hull.* 21. *Relh.* 34. *Sibth.* 41. *Abbot.* 18. *Curt. Lond. faſc.* 2. *t.* 5. *Dickſ. H. Sicc. faſc.* 14. 3.

Gramen pratenſe paniculatum majus, latiore folio. *Raii Syn.* 409.

THIS *Poa* agrees much with the preceding in habit and general appearance, grows no leſs frequently in almoſt every ſituation, and is as valuable to the huſbandman. It flowers rather earlier, comes ſooner into leaf, and will grow in much drier places than *P. trivialis*; but, according to Mr. Curtis's obſervations, the latter produces a better crop as the ſeaſon advances.

P. pratenſis is known from *trivialis* by the ſmoothneſs of its ſtems when handled, by having generally more florets in a calyx, but moſt decidedly by its ſhort blunt ſtipulæ; an infallible and invariable character, properly inſiſted on by Mr. Curtis, and we believe found out by himſelf, though juſtice to Mr. Hudſon obliges us to recollect it is mentioned previouſly by him in the *Fl. Anglica*. The panicle has more often a purple hue than that of the laſt deſcribed, and the web connecting the florets is peculiarly long and complicated. *P. anguſtifolia* of Linnæus appears to us a variety of this with narrow rigid leaves, and a ſmaller panicle.



Sept.r 1. 1802. Published by Jn.o Sowerby, London.

STELLARIA uliginoſa.

Bog Stitchwort.

DECANDRIA Trigynia.

GEN. CHAR. *Cal.* 5-leaved, ſpreading. *Petals* 5, deeply cloven. *Capſ.* ſuperior, of 1 cell, with 6 teeth at the orifice. *Seeds* numerous.

SPEC. CHAR. Leaves elliptic-lanceolate, entire, with a callous tip. Flowers irregularly panicled, lateral. Petals ſhorter than the calyx.

SYN. Stellaria uliginoſa. *Sm. Fl. Brit.* 476. *Curt. Lond. faſc.* 6. *t.* 28. *With.* 420. *Hull.* 97. *Sibth.* 141. *Abbot.* 96.

S. graminea γ. *Hudſ.* 190. *Linn. Fl. Suec.* 150. *Relh.* 170. *ed.* 2. 171.

Alſine longifolia, uliginoſis proveniens locis. *Raii Syn.* 347.

FREQUENT in rivulets, and clear brooks or ditches by road ſides, flowering plentifully in June.

The root is annual, ſmall and fibrous. Herb weak and ſlender, ſmooth, of a pale ſomewhat glaucous green. Stems branched, quadrangular, leafy. Leaves rather elliptical, furniſhed with many parallel veins, entire, but waved in the margin, tipped with a ſmall callous point. Flower-ſtalks axillary and terminal, ſpreading, generally three together, of which 2 are three-cleft and three-flowered, the remaining one ſingle-flowered, all furniſhed with membranous lanceolate bracteæ. Flowers ſmaller than in any other Britiſh ſpecies. Calyx-leaves 3-nerved, the outermoſt fringed. Petals greeniſh white, ſhorter than the calyx. Dr. Stokes has obſerved that the ſtyles vary from 3, the natural number, to 4 or 5.

It may ſeem ſtrange that this very diſtinct ſpecies ſhould ever have been confounded with *S. graminea*, (ſee *v.* 12. *t.* 803.); the German botaniſts are entitled to the honour of firſt diſtinguiſhing them. The peculiar inflorescence, the ſhort petals, and the form and ſtructure of the leaves, mark *S. uliginoſa* with ſufficient preciſion.

Oct.1 1802. Published by Jas Sowerby, London

VERONICA ſerpyllifolia,
Smooth Speedwell.

DIANDRIA Monogynia.

GEN. CHAR. *Cor.* inferior, of 1 petal, 4-cleft, wheel-ſhaped; lower diviſion narroweſt. *Capſ.* 2-celled.

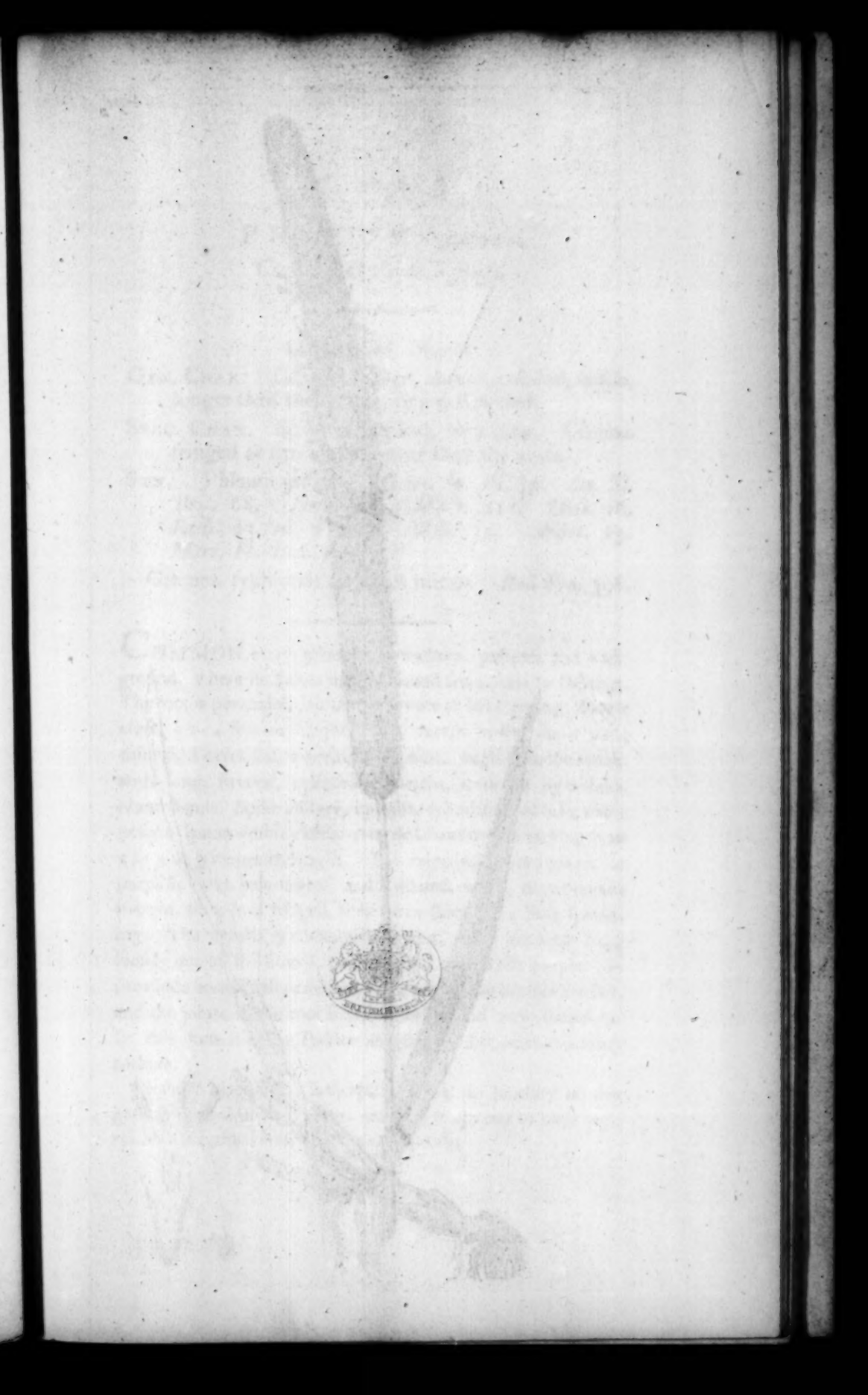
SPEC. CHAR. Cluſter terminal, rather ſpicate. Leaves ovate, ſlightly crenate, three-nerved, ſmooth. Capſule inverſely heart-ſhaped, ſhorter than the ſtyle.

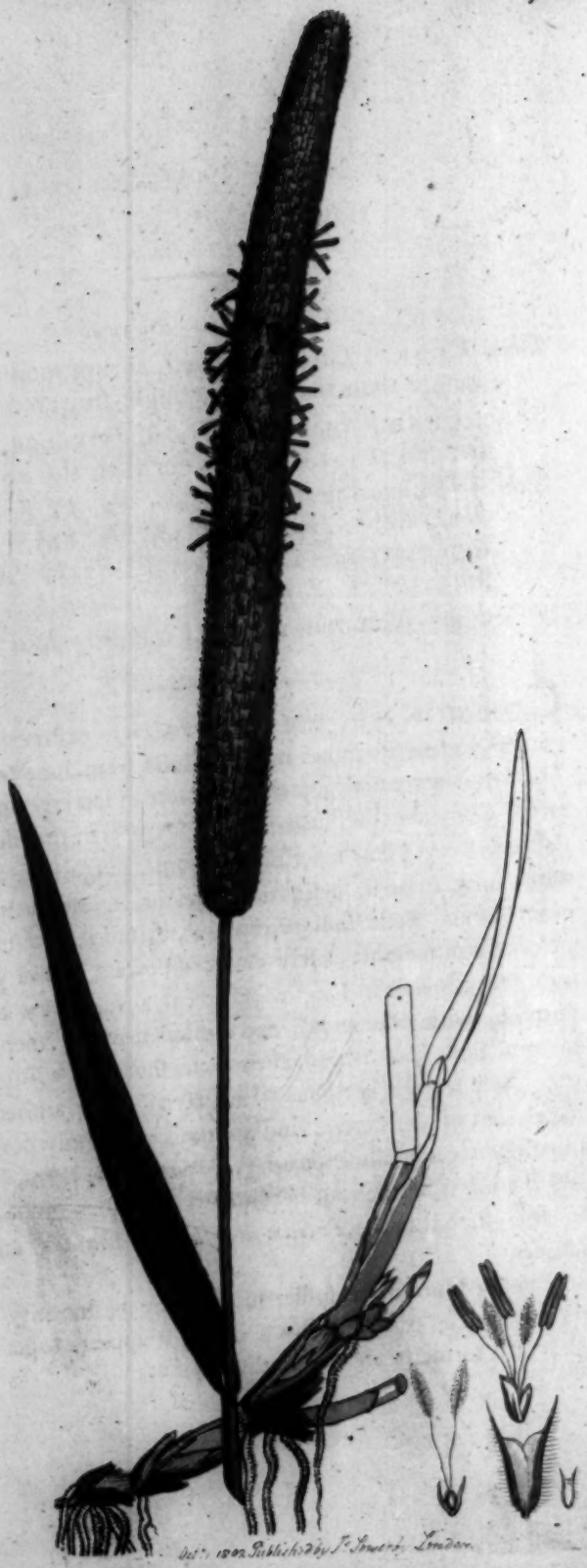
SYN. Veronica ſerpyllifolia. *Linn. Sp. Pl.* 15. *Sm. Fl. Brit.* 19. *Hudſ.* 4. *With.* 14. *Hull.* 4. *Relh.* 4. *ed.* 2. 7. *Sibth.* 5. *Abbot.* 3. *Curt. Lond. faſc.* 1. *t.* 3.

V. pratenſis minor. *Raii Syn.* 279.

THIS little *Veronica* is common enough in graſſy paſtures, which are rather moiſt; ſometimes in the ſhady parts of cultivated grounds, flowering in the early part of ſummer. The roots are perennial, fibrous, and the proſtrate ſtems throw out numerous radicles by which the plant is much increaſed. The flowering branches are moſtly erect, bearing a few pairs of oppoſite, roundiſh, ſlightly crenate, 3-ribbed leaves on ſhortiſh footſtalks. Each branch terminates in a lax ſpike or *racemus* of ſmall, pale blue, ſometimes fleſh-coloured flowers, accompanied by elliptical, ſeſſile *bracteæ*. The ſegments of the calyx are equal, obovate, blunt, ſcarcely at all pubeſcent. The corolla, however pale occaſionally, is always marked with dark blue ſtreaks. Capſule inverſely heart-ſhaped, deeply divided, about as long as the ſtyle. In wet places the whole herb is very ſmooth and ſhining, rather fleſhy; when it occurs in very dry ſpots, it becomes all over downy; indeed the flower-ſtalks and *bracteæ* are frequently liable to this alteration.

From a compariſon of ſpecimens of Mr. Dickſon's *V. humifuſa*, found in the mountainous rills of Scotland, I have ventured in the *Flora Britannica* to make it a variety of the above ſpecies, which is liable to many variations with reſpect to the poſition of its ſtems and form of its leaves.





Del.t 1802. Published by J.t Sowerby, London.

PHLEUM pratenſe.

Common Cat's-tail-graſs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* two-valved, abrupt, pointed, ſeſſile, longer than the corolla, ſingle-flowered.

SPEC. CHAR. Spike cylindrical, very long. Glumes fringed at the back, longer than the awns.

SYN. Phleum pratenſe. *Linn. Sp. Pl.* 87. *Sm. Fl. Brit.* 68. *Hudſ.* 25. *With.* 117. *Hull.* 16. *Relh.* 23. *ed.* 2. 24. *Sibth.* 34. *Abbot.* 13. *Mart. Fl. Ruſt. t.* 5.

Gramen typhinum majus et minus. *Raii Syn.* 398.

COMMON every where in meadows, paſtures and waſte ground, where its ſpikes may be found from June to October. The root is perennial, jointed, and more or leſs creeping. Stems erect, 3 or 4 feet in height, leafy, except in the upper part, ſtriated. Leaves flat, tapering to a point, roughiſh to the touch, with long, ſtriated, cylindrical ſheaths, crowned by a ſhort, blunt ſtipula. Spike ſolitary, upright, cylindrical, obtuſe, compoſed of innumerable cloſely-crowded flowers, and varying from 2 to 4 or 5 inches in length. The calyx-valves are green, or purpliſh, with pale nerves, and a dilated, white, membranous margin, their keel fringed, their awns ſhort and a little ſpreading. The corolla is ribbed with green. The antheræ hang looſely out of the flower, and are moſt commonly purple. In ſituations occaſionally dried up, every part of the herb is ſmaller, and the joints of the root become ſwelled and very ſucculent. In this ſtate it is the *Phleum nodoſum* of Linnæus and other authors.

Profeſſor Martyn has ſufficiently ſhown the inutility of this graſs to agriculturiſts: by his account, it appears to have been celebrated formerly on very ſlight grounds.

Published by J. Sowerby, London

PHLEUM paniculatum.

Panicled Cat's-tail-graſs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* two-valved, abrupt, pointed, ſeſſile, longer than the corolla, ſingle-flowered.

SPEC. CHAR. Panicle cylindrical, reſembling a ſpike. Glumes naked, tumid in their upper part. Stem branched.

SYN. Phleum paniculatum. *Hudſ.* 26. *Sm. Fl. Brit.* 70. *With.* 117. *Hull.* 16. *Relh. Suppl.* 1. 8. *ed.* 2. 24.

Phalaris paniculata. *Ait. Hort. Kew. v.* 1. 87. *Sibth.* 34.

THE merit of making this graſs known to Britiſh botaniſts certainly belongs to Mr. Hudſon, who has given an excellent deſcription of it, though his ſynonyms are all doubtful at leaſt, and the citation of Linnæus certainly wrong. It is an annual graſs occurring, but very rarely, on dry, elevated ground, flowering in July. Mr. Hudſon ſeems to have gathered it near Briſtol. Mr. Relhan has ſought for it in vain himſelf in Cambridgeſhire. In the Bankſian Herbarium are ſpecimens from Badminton park, Glouceſterſhire, and Mr. Dawſon Turner has communicated it to us from Bedfordſhire. The figure is from a garden ſpecimen, compared with wild ones.

Root of ſeveral ſtrong ſhort fibres. Stems ſeveral, branched, leafy, very ſmooth. Leaves numerous, upright, roughiſh, pointed, of a graſs-green, not at all glaucous, hue; inveſting the ſtem with their long, ſtriated, ſomewhat ſwelling ſheaths. Stipulæ ſomewhat oblong and pointed, generally torn. Panicles ſolitary, erect, and ſtraight, 2 or 3 inches long, exactly reſembling the denſe cylindrical ſpike of the other ſpecies; but when bent to one ſide, they are found to conſiſt of many branched lobes, forming a true panicle, which feels rough, like a file, from the ſhort rigid awns of the flower. Calyx variegated with green and white, wedge-ſhaped, rough under a magnifier, of two equal wedge-ſhaped glumes, ſwelling upwards, each tipped with a ſhort awn, and bordered on the inſide with the genuine, abrupt margin of a *Phleum*. Antheræ ſhort, whitiſh.

This plant, unknown to Linnæus, is the *Phalaris aſpera* of Retzius, Wildenow, and the French botaniſts.

Oct.r 1.1802. Published by Jas. Sowerby, London.

BROMUS mollis.

Soft Brome-graſs.

TRIANDRIA Digynia.

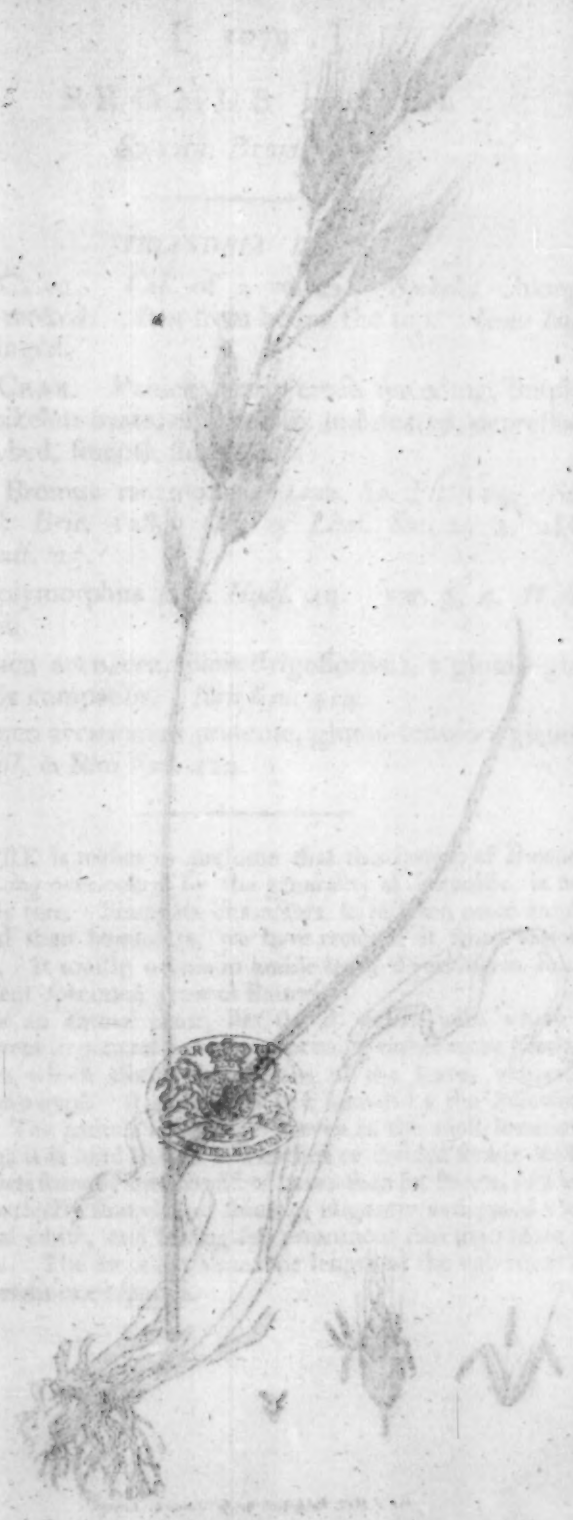
GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner huſk* fringed.

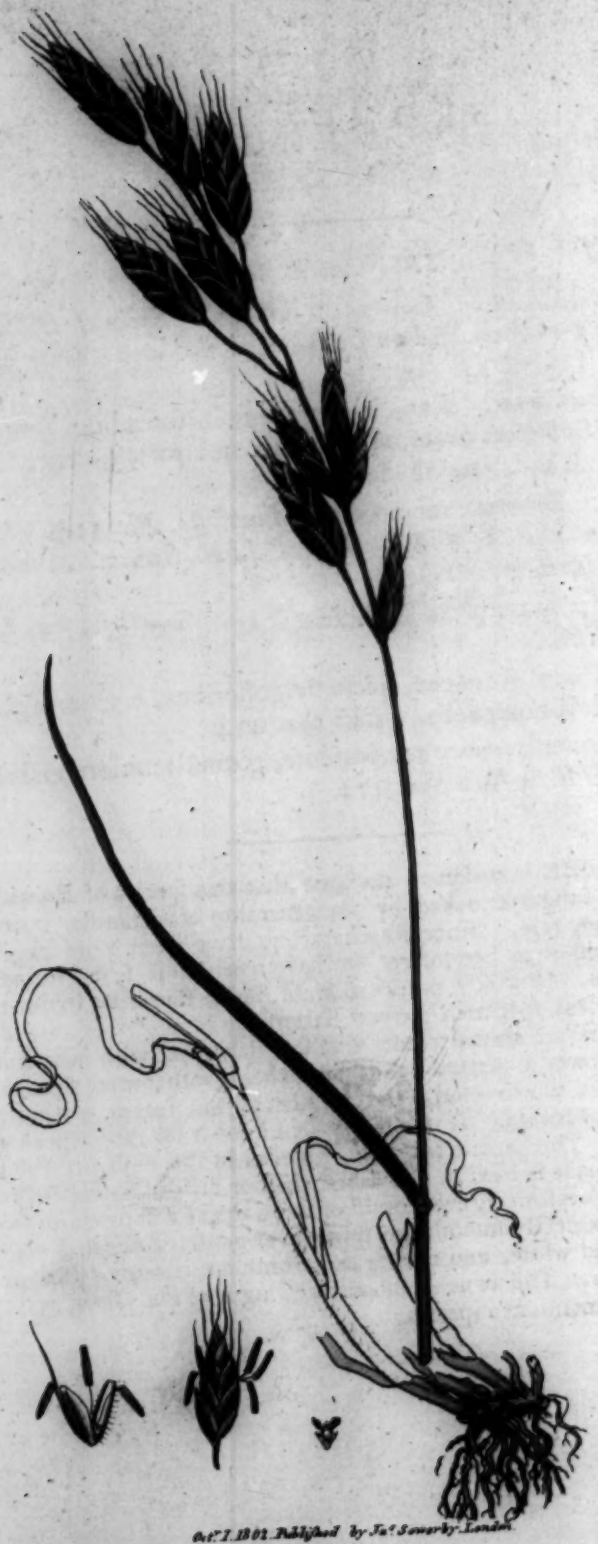
SPEC. CHAR. Panicle erect, cloſe, compound. Spikelets ovate. Florets imbricated, depreſſed, ribbed, downy.

SYN. Bromus mollis. *Linn. Sp. Pl.* 112. *Sm. Fl. Brit.* 126. *Tr. of Linn. Soc. v.* 4. 284. *Hull.* 25. *Curt. Lond. faſc.* 1. *t.* 8. *Mart. Fl. Ruſt. t.* 99. *Relh.* 45. *ed.* 2. 39. *Sibth.* 47. *Abbot.* 23. B. polymorphus *α*. *Hudſ.* 48. var. 1. *With.* 159. Feſtuca avenacea hirſuta, paniculis minùs ſparſis. *Raii Syn.* 413.

VERY common and abundant in paſtures, alſo on waſte ground, walls, &c. flowering early in June, when it makes a conſiderable part of the general crops of hay.

Root annual, of a few ſimple fibres. Stem erect, about 2 feet high, ſimple, generally ſmooth, ſometimes hairy; the joints ſwelling, and often thickly clothed with hairs. Leaves and their ſheaths thickly covered with ſoft hoary pubeſcence. Stipulæ bluntly pointed. Panicle 2 or 3 inches long, erect, cloſe, a little ſpreading when in full flower; its branches half-whorled, the uppermoſt ſimple, ſome of the reſt always more or leſs ſubdivided, various in length, all angular, and downy. Spikelets nearly upright, ovate, acute, rather tumid. Florets from 7 to 10, rarely fewer, cloſely imbricated, elliptical, concave, and depreſſed, not cylindrical; their outer valve downy, marked with 7 or 9 ſtrong, green ribs, and bearing a rough awn about their own length, a little below their ſummit; inner valves membranous, with a thick green fringed edge. Seed elliptical, large, depreſſed and nearly flat.——In a ſtarved condition the panicle of courſe becomes ſimple, conſiſting ſometimes of only 3 or 4 ſpikelets; which conſtitutes the *B. nanus* of Weigel, and is frequent on the ſandy ſea ſhore.





Oct.1.1802. Published by Jas Sowerby. London

BROMUS racemoſus.

Smooth Brome-graſs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner huſk* fringed.

SPEC. CHAR. Panicle nearly erect, ſpreading, ſimple. Spikelets ovate, of about ſix imbricated, depreſſed, ribbed, ſmooth florets.

SYN. Bromus racemoſus. *Linn. Sp. Pl.* 114. *Sm. Fl. Brit.* 128. *Tr. of Linn. Soc. v.* 4. 286. *Hull.* 25.

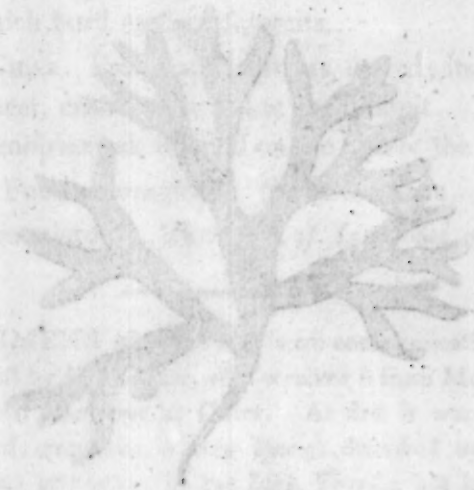
B. polymorphus β, δ. *Hudſ.* 49. var. 3, 4. *With.* 160.

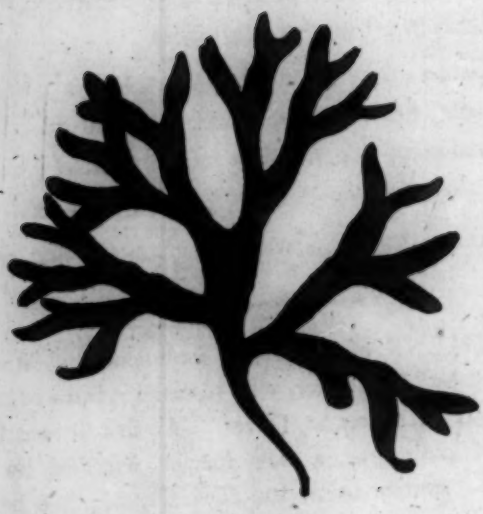
Feſtuca avenacea, ſpicis ſtrigoſioribus, e glumis glabris compactis. *Raii Syn.* 414.

Gramen avenaceum pratenſe, glumâ tenuiore glabrâ. *Dill. in Raii Syn.* 414.

THERE is reaſon to preſume that this ſpecies of *Bromus*, though long overlooked by the generality of botaniſts, is not extremely rare. Since its characters have been more amply explained than heretofore, we have received it from various quarters. It moſtly occurs in arable land, flowering in June. The preſent ſpecimen grew at Batterſea.

This is an annual plant, like the *B. mollis*, with which it much agrees in general habit, except being rather more ſlender. The hairs which clothe the ſheaths of the leaves generally point downward. It is however beſt known by the following marks. The panicle is ſimple, for even in the moſt luxuriant ſpecimens it is hard to find a branched or divided flower-ſtalk: the ſpikelets ſcarcely ever conſiſt of more than ſix florets, and are always perfectly ſmooth and ſhining, elegantly variegated with green and white, and having leſs prominent ribs than thoſe of *B. mollis*. The awns are about the length of the valves, as in the laſt-mentioned ſpecies.





Oct.r 1. 1802 Published by Ja.s Sowerby, London.

FUCUS norvegicus.

Red Norway Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

SPEC. CHAR. Frond cartilaginous, forked; its branches linear, entire, rounded at the ſummit. Tubercles hemiſpherical, ſituated on the diſk of the leaf.

SYN. Fucus norvegicus. *Turn. Syn.* 222.

F. crenulatus β. *Turn. Tr. of Linn. Soc. v.* 6. 131.

SPECIMENS of this Fucus were communicated to us in March laſt by Mr. Turner, who received it from Mr. Dillwyn, its original diſcoverer at Dover. At firſt it was ſuppoſed a variety of *crenulatus*, a new ſpecies deſcribed by the firſt-mentioned gentleman in the *Linn. Tranſ.*; but he has now admitted it to the rank of a ſpecies in his *Synopſis*, and ſurely with the greateſt propriety. We have not at hand the figure of Gunner, *Fl. Norv. v.* 2. *t.* 3. *f.* 4. but have no doubt of its being cited with propriety.

F. norvegicus bears a conſiderable reſemblance to *F. criſpus*, (till lately taken by Britiſh botaniſts for the *ceranoides* of Linn.) particularly in its cartilaginous ſubſtance, and in its forked figure; it is alſo, as Mr. Turner obſerves, akin to *rubens*, ſee our *t.* 1053, but is never proliferous, neither is it of ſo membranous a texture, or of ſo pale a colour. The fructification moreover eſſentially diſtinguiſhes it from both, conſiſting of red hemiſpherical tubercles, projecting from the diſk of the frond, by no means immerſed in its ſubſtance. Theſe tubercles contain numerous ſeeds, encloſed in a thick coat.